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Report of the Bombay Economic and Industrial Survey Committee report

Vol. II

Notes on the economy and industries in the different districts of the Bombay Province

Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

AHMEDABAD
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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders, and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small-scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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AHMEDABAD.

Position and Area.

The district of Ahmedabad lies between 21° 26′ and 23° 27′ north latitude and 71° 19′ and 73° 27′ east longitude and covers an area of 3,846 square miles. It is bounded on the west and south by the peninsula of Kathiawar; on the north by the northern division of Baroda Territory; on the north-east by Mahi Kantha Territory; on the east by the State of Balasinor and the district of Kaira; and on the south-east by the State and Gulf of Cambay. The boundary line is irregular, and two portions, the Prantij taluka in the north-east, and the Gogha Peta in the south, are cut off from the main body of the district by the territories of Indian States. The compactness of the district is also broken by several villages belonging to Baroda and Kathiawar which lie within it, while several of its own are scattered in small groups beyond its borders.

Physical Features.

2. In the extreme south and also just beyond the northern boundary are a few rocky hills. But between these points the whole of the district forms a level plain, gradually rising towards the north and east, its surface unbroken by any inequality greater than a sand hill. In the extreme west the country is subject to inundation and there are extensive salt wastes stretching to the Rann. The river Sabarmati rises in the north-east near the extremity of the Aravali range and flows into the Gulf of Cambay. The river has three tributaries, the Kari, Meshwa and Majham which with the Shelva and Andhari all flow south-west. Flowing east from Kathiawar are the Bhogava, Bhadar, Utavli, Nilki, Pinjaria and Adhia rivers. There are several creeks of which the most important are those of Dholera and Gogha.

Climate and Rainfall.

3. In the cold season the range of temperature is very great. Generally speaking, the climate of the central portion of the district is more oppressive during the hot season, and at all times less healthy, than along the coast line or in the north, the coast benefiting by its nearness to the sea, and the north of the district by its height above the sea level. The average rainfall of the district is about 29 inches. It is heaviest in the hilly country of Modasa and in Prantij.

Population.

4. According to the Census of 1931, the district has a population of 999,768 persons of whom 600,200 live in rural areas consisting of

869 villages while the remaining 399,568 are to be found in 12 towns. Of these the important towns are :—

	Population.
Ahmedabad City	234,265
Viramgam	18,965
Dholka	13,743
Dhandhuka	9,076

It will be noticed that the proportion of urban population to the total population is nearly 40 per cent., the city of Ahmedabad alone accounting for more than 23 per cent. of the urban population. The proportion of urban population is thus considerably higher than the corresponding provincial (23·3 per cent.) and all-India (10·9 per cent.) averages.

According to the Census of 1931, the total number of principal workers in the district is 261,566 of whom 222,807 are males. The occupational distribution of this number is given below :—

Exploitation of animals and vegetation	108,983
Exploitation of minerals	1,207
Industry	83,915
Transport	9,881
Trade	17,579
Public force and Administration	6,415
Professions and liberal arts	5,273
Living on their income	2,296
Domestic service	7,161
Insufficiently described	13,443
Unproductive	5,413
Total ..	261,566

The proportion of the industrially occupied persons to the total earners is more than 32 per cent. and establishes this district as the most industrialised one in the Bombay Province. In addition to the 83,915 persons shown as engaged in industrial occupations according to the Census classification, there are 7,755 persons engaged in stock-raising and 1,027 persons engaged in salt-making. These occupations can also be considered as industrial though they are included under "exploitation of animals and vegetation" and "exploitation of minerals" respectively in the Census returns. The total industrial workers in the district can, therefore, be taken at 92,697.

Health and Medical Facilities.

5. As regards health conditions, vital statistics show that the district as a whole is not healthy. Though the mean ratio of births per thousand for the five years ending 1937 was 45·38, the survival rate was only 11·93 as the mean ratio of deaths was 33·45, the highest in the whole of the Province.

In Ahmedabad town there are nine hospitals, two of which are maintained by Government, one of them being a Police hospital. There are also other institutions like the X-Ray Institution, eye hospital, maternity homes, etc. In addition there are eleven dispensaries in Ahmedabad town of which nine are maintained by the Municipality. In the district, there are thirteen dispensaries. Of these seven are maintained by the Municipalities, three by the District Local Board, two by Missions and one by Government. The total number of doctors in the district is reported to be 270 of which as many as 237 are in Ahmedabad town. In rural areas, the proportion of doctors to population comes to one for every 18,700 persons.

Literacy and Educational Facilities.

6. According to the Census of 1931, 119,397 persons are returned as literate thus constituting a percentage of only 11·9; for a highly urbanised district, this percentage is surprisingly low. It is even more surprising that the less urbanised districts of Kaira and Broach and Panch Mahals should have a higher proportion of literacy among their population.

The educational facilities in the district are summed up in the following statement for the year 1937–38:—

Description.	No. of Institutions.	No. of pupils.
Primary Schools	640	73,989
Secondary (including lower secondary and English teaching) Schools.	49	9,848
Industrial and Commercial Schools ..	3	321

Of the 869 villages in the district only 363 had schools in them.

Transport Facilities.

7. The district has good railway facilities. The railway from Bombay to Rajputana runs through the district. Another line runs from Ahmedabad to Viramgam, where a metre-gauge branch turns south to Wadhwan and Bhavnagar, while another branch goes to Kharaghoda. Another metre-gauge line runs from Viramgam to Mehsana, where it joins the line from Ahmedabad and connects the Kathiawar railways with

the other minor lines. The Ahmedabad-Dholka-Dhanduka metre-gauge line is also of considerable importance. The headquarter town of Ahmedabad is connected with most of the taluka towns by the railway system. The district, however, is not well served by roads, as the total mileage of both metalled and unmetalled roads in 1937–38 was only 216·01 and 342·07 miles respectively.

Survey of Resources : Agricultural and Live-stock.

8. The district has a total area of 2,465,694 acres of which 1,648,911 acres constitute the gross cropped area. Forests absorb only 9,115 acres while other uncultivable land comes to 496,376 acres. Current fallows constitute 254,949 acres. There are 75,544 acres which are returned under culturable waste or land which is theoretically available for cultivation.

The following table gives the details of the classification by crops of the cultivated area :—

	1937–38. Area in acres.
Rice	68,431
Wheat	273,052
Barley	2,385
Jowari	406,084
Bajri	121,924
Ragi	2,973
Maize	5,768
Gram	52,193
Other food grains including pulses	53,454
Sesame (*Til*)	31,324
Rape and mustard	17,033
Groundnuts	71,278
Castor seed	5,613
Other oil-seeds	483
Condiments and spices	2,228
Sugarcane and other sugars	558
Cotton	387,686
Other fibres	1,812
Tobacco	5,304
Fodder crops	130,232
Fruits and vegetables	8,894
Miscellaneous food and non-food crops ..	202
Total ..	1,648,911

It will be noticed that the important crop of the district is cotton which accounts for nearly one-fourth of the cropped area. Other important commercial crops are groundnuts and sesame. The main food crops are jowari, wheat and bajri.

Fruits and vegetables account for an area of nearly 9,000 acres. More details were obtained from the Department of Agriculture in respect of these important crops and the details supplied by that Department in respect of 1938–39 are as below :—

	Acres. 1938–39.
Vegetables—	
Potatoes	254
Sweet potatoes	193
Yam	30
Radish	37
Onions	331
Others	61
	906
Green vegetables—	
Tomato	60
Fenugreek (*Methi*)	23
Edible Hibiscus (*Bhendi*)	510
Musk melon	226
Water melon	182
Others	2,832
	3,833
Fruit trees—	
Plantain	134
Mango	538
Lime	384
Pomegranate	281
Guava	434
Papaya	359
Others	1,956
	4,086
Total, Fruits and Vegetables ..	8,825

Another noticeable feature is the large area under fodder crops, which makes out the district as a cattle-breeding district. In fact, Ahmedabad district along with Kaira produces the best breed of cattle in the whole of this Province known as the *Kankreji* cattle. Throughout the greater part of the district the breed is essentially of the *Kankreji* type and the ordinary village cattle are distinctly above the general run of other parts. According to the Census of cattle taken in 1934–35 the details of live-stock in the district are as follows :—

Bulls and Bullocks (breeding, working and young stock).				19,252
Cows	(	do.	do.	). 147,572
Buffaloes	(	do.	do.	). 34,068
Cow-buffaloes	(	do.	do.	). 182,928
Sheep and Goats	..	..	..	.. 130,935
Horses and ponies	..	..	..	.. 7,275
Donkeys	..	..	..	.. 12,254
Camels	..	..	..	.. 1,258

Of these, 171,801 are milch cattle, consisting of 74,570 cows and 97,231 cow-buffaloes.

Survey of Resources : Minerals.

9. Considerable tracts in Viramgam are reported to be covered with earth suited to the manufacture of saltpetre. Similar material is also found near Dholera. The district Gazetteer states that about the beginning of the 18th century saltpetre was made in large quantities but after the transfer of these areas to the English, the demand ceased and in spite of several efforts later on, the industry did not survive. Crude soda (*us*) used in soap-making is also said to be found in large quantities in the west of Prantij. Among the stones, the most valued are found near Ranpur in Dhandhuka and are known as *doradar* and *ratia* stones. They take high polish. Limestone or *Kankar* is found in rivers and water courses and in the extensive beds eight miles south-west of Viramgam and Dhandhuka. It is used for mortar and road making.

Survey of Resources : Forests.

10. The district as a whole is open and poorly wooded. The chief trees are mango, *rayan* (*Mimusops hexandra*), *mahua* (*Bassia latifolia*), and *nim* (*Melia Azadirachta*). The Modasa hills bear inferior teak and bamboo and also produce the *khair*, *babul* and *pipal*. Many of the trees and shrubs supply food, medicines, and materials for dyeing and tanning. Gum from the *khair* and *babul* is eaten by the poorer classes. The berries of the *mahua* or *mhowra* are boiled with grain and leaves of a creeper called *dori* form a favourite article of food with the Bhils.

Survey of Resources : Power.

11. There are only two electric supply companies in the district—one at Ahmedabad and the other at Viramgam. Out of 17·4 million units of electricity generated by the Ahmedabad company 14·7 million units are sold to the public, of which as much as 11·7 million units are consumed for power purposes. The Viramgam company generates about 171,000 units of electricity of which 135,000 units are sold, the units sold for power purposes being about 74,000.

Survey of Resources : Capital.

12. There are a number of agricultural and non-agricultural co-operative credit societies. According to the Report for Co-operative Societies for 1937–38, the agricultural societies in the district number 86 and have a working capital of Rs. 5·17 lakhs while the non-agricultural ~~credit~~ societies are as many as 102 with a working capital of nearly Rs. 48 lakhs. The District Central Co-operative Bank had a working capital of Rs. 4·57 lakhs during 1937-38. Moreover, the Imperial Bank of India, the Bank of India, the Central Bank of India, the Bank of Baroda and other banks have got their branches or offices at Ahmedabad. As for post office savings banks, there were 156 such banks during 1937–38—the highest number in any district in the Province. The total number of accounts in these savings banks was 44,543 and the total amount of balance to their credit was nearly Rs. 18 lakhs. During the same year cash certificates to the extent of Rs. 33·1 lakhs were sold in the district. Thus the district seems to be the richest in the whole of the Province excluding Bombay City.

Industries in the District—General.

13. Next to the City of Bombay, Ahmedabad is the most important industrial centre in the Province. The population engaged in different kinds of industrial occupations has already been estimated at 92,697 including persons engaged in stock-raising and salt-making. Of these, the following classes of workers are more or less suppliers of pure services and cannot be classified as makers of manufactured commodities :—

Butchers	652
Tailors, milliners, etc.	3,819
Washing and cleaning	2,202
Barbers, hair dressers, etc.	2,423
Scavenging	1,526
Total ..	10,622

The remaining 82,075 are distributed over different occupations in the following manner :—

1.	Stock-raising	7,755
2.	Exploitation of salt, saltpetre	1,027
3.	Cotton gins and presses	16,522
4.	Cotton spinning and weaving	34,726
5.	Rope, twine, string and other fibres ..	815
6.	Wool carding, spinning and weaving ..	761
7.	Dyeing, bleaching, etc.	576
8.	Working in leather	3,102
9.	Carpenters	2,577
10.	Basket making	619
11.	Blacksmiths	1,638
12.	Potters	3,188
13.	Brick and tile makers	610
14.	Manufacture and refining of vegetable oils ..	1,559
15.	Boot and shoe making	512
16.	Lime burners, cement workers, etc. ..	3,294
17.	Printers	315
18.	Makers of jewellery and ornaments ..	1,209
19.	Other miscellaneous occupations ..	1,170
	Total ..	82,075

Of these, no less than 79,583 workers were employed in concerns coming under the Indian Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	No. of factories.		No. of workers.	
	1931.	1938.	1931.	1938.
Government and Local Fund	2	3	106	83
Textiles	97	109	74,303	114,671
Engineering	8	44	645	1,501
Minerals and metals	6	9	333	112
Food, drink and tobacco	5	9	180	285
Chemicals, dyes etc.	10	46	722	2,324
Paper and printing	13	40	275	1,088
Processes regarding wood, stone and glass .	2	8	95	147
Processes regarding hides and skins ..	1	1	30	54
Miscellaneous	1	4	32	267
Seasonal factories	56	69	2,862	4,257
Total ..	201	342	79,583	124,789

14. The investigator, Mr. A. B. Trivedi, spent about a month in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The investigator interviewed some of the handloom weavers in Ahmedabad City, Dholka, Dhandhuka, Sarkhej, Chaloda and Bavla. Mr. Telang estimated in 1927 that there were 750 handlooms in Ahmedabad and 700 handlooms at Dholka. Statistics collected as a result of the special inquiry in 1936-37 by the Northern Division Industrial Co-operative Association showed that there were only 200 handlooms in Ahmedabad and 600 at Dholka. The investigator's enquiries showed that the number of handlooms had diminished still further in Ahmedabad, and according to the local weavers the number of handlooms at Dholka did not now exceed 350. The handloom weavers of this district manufacture not only *sarees* but also towels and *dhoties*, shirtings and coatings, the counts used being 6 to 20 for the towels and coatings, and 60s and 80s for the *dhoties* and *sarees*. The handloom weavers in Dholka also prepare *sarees* with a specialised type of gold-border which the mills cannot manufacture. There are not many independent artisans in this district, most of the handloom weavers, being outworkers. The earnings of weavers differ according to the type of cloth produced and are about Rs. 9 to Rs. 20 per mensem. It is the weavers who specialise in making towels that earn the higher income. A noticeable thing about the handloom weaving industry of the district is that in places outside Ahmedabad it is largely a seasonal occupation, the weaver resorting to agricultural labour during the slack season. Many of the weavers in this district appeared to be interested in the making of coarse cloth and they urged that there should be some restriction on the making of coarse cloth by the mills. There are also some weavers who suggest that there should be restrictions on the making of fine cloths by the mills.

There is an Industrial Co-operative Association in Ahmedabad which supplies raw materials and makes arrangements for the sale of the finished products made by the handloom weavers. The Association helps to put new designs in the market. The Manager of the Association suggested that something should be done to dispel the ignorance of the weavers which comes in the way of their proper organisation.

Tape Making.

16. Tape making is an important branch of the textile industry in Ahmedabad. It is estimated that there are 20 families engaged in this industry, in addition to which there are 6 to 7 tape making factories.

The investigator interviewed 3 families engaged in making tapes and the owner of one tape making factory. The equipment of an artisan engaged in this industry is usually worth about Rs. 8. He uses yarn of 6s and can manufacture annually about 36 maunds of tape of the width of 1½". He sells this quantity for about Rs. 540. The cost of the raw material is said to be Rs. 288. His average monthly income thus comes to about Rs. 20 to Rs. 21. The artisan is usually assisted in his work by his wife and other members of his family. The owner of the tape making factory interviewed by the investigator employed 4 persons of whom one is a mechanic. He has 20 tape making machines worth Rs. 30 each and his factory is run by electric power. The output per year is reported to be about 4,800 lbs. of tape which is sold for about Rs. 5,000. The boys employed in his factory are paid at the rate of Rs. 5 to Rs. 6 a month, while the mechanic is paid at Rs. 22. The owner is able to get an income of Rs. 60 to Rs. 65 a month from this factory.

Silk Weaving.

17. Ahmedabad was once famous for the excellence of its silk products. Now, however, the industry is in a state of decay and it is estimated that there are not more than 30 to 40 looms engaged in making silk cloths. The decay of this industry though partly due to competition from outside is largely the result of a change in taste. At Dholka, silk *sarees* interwoven with cotton yarn of 80s are prepared and the weavers earn about Rs. 8 to Rs. 12 a month. There are not many weavers who manufacture silk cloth. Most of them usually combine with it the production of *Kinkhab*. Silk weaving industry on a cottage basis is very negligible in the economy of the district.

Kinkhab Weaving.

18. This was once a very important and well-known industry of Ahmedabad. According to the information collected by the investigator it appears that there are now not more than 100 weavers working in this industry who employ about 200 wage earners to help them in the preliminary processes. The raw materials consist of silk yarn and gold thread. Silk yarn is mainly Chinese and Japanese but silk yarn from Kashmir and Bangalore is also used. The weavers are mostly outworkers to whom the raw material is given by dealers who also take from them the finished products. One *kinkhab* worker said that he obtains Rs. 26 for 35 *gajs* or 70 feet of *kinkhab*. This takes him a month to make, while he has to pay two wage-earners, one at Rs. 6 and another at Rs. 9 to help him. That leaves him a net income of Rs. 11 a month. Another worker said that he gets Rs. 30 for 35 *gajs* of *kinkhab* and earns a net income of Rs. 15. A third *kinkhab* worker who has two looms, employs 4 workmen, and gets a net monthly income of Rs. 30 for himself.

19. The main difficulty of this industry is the fall in demand due to a change in public taste. Moreover, the industry suffers from competition of inferior quality goods produced with imitation threads

and also from the competition of *kinkhabs* produced at Benares. There is no competition from powerlooms. Moreover, as pointed out by Mr. Fernandes in his report on the Arts-Crafts in the Bombay Presidency, the artistic skill of these weavers is rather low. It is stated that this as well as the other allied arts-crafts such as the making of *kor*, *palavs* and *modhiyas* are all suffering from decline due to the change in public taste. It was suggested that as cheap imitation products form a source of keen competition, some kind of grading should be introduced in this industry. It would also seem worth while to teach the weavers, new designs.

Blanket Weaving.

20. There is a small blanket-weaving industry in the village of Aniali Bhimji near Dhandhuka, where about 20 families are engaged in the industry. The weavers get their wool locally and the dyes from Dhandhuka. It is estimated that the workers in this industry earn on an average about Rs. 144 a year, which they supplement by working as agricultural labourers. The weavers interviewed by the investigator stressed the importance of having a marketing organisation which would provide them with raw wool and sell the blankets prepared by them.

Powerloom Weaving.

21. There are reported to be about 50 powerloom weaving factories in the city of Ahmedabad having about 500 looms. They undertake silk and cotton weaving. The yarn used is mostly foreign and is obtained from Bombay. The investigator interviewed two owners of powerloom factories, one with 30 looms and the other with 23. The former employs 35 persons and the latter 23. These factories produce cloth for shirting and coating, using spun silk yarn, mercerised yarn, cotton yarn and artificial silk yarn. They sell their cloth to dealers in and outside Ahmedabad and sometimes they get orders from places in the Punjab and the United Provinces. Most of them employ canvassers and sell on credit to the dealers. It is stated that the owners get a return on their capital of about 5 per cent. Wages given to the labourers vary from annas 12 to Rs. 3 for a piece of 30 to 33 yards. The requests made by the owners of powerlooms were : (1) financial assistance for storing raw materials and improving their equipment, (2) leniency in the administration of the Factories Act, (3) Government stamping of real silk cloth so as to distinguish it from imitation silk cloth, (4) facilities to see new types of machinery and get the necessary contact with new methods and (5) reduction in electric charges.

Calico Printing.

22. It is estimated that in Ahmedabad there are 125 *karkhandars* and 1,500 outworkers who are engaged in this industry. The outworkers work at home and get help from the members of their family. The equipment consists of wooden stamps prepared locally ; these

require to be changed from year to year to suit public taste. Their prices vary according to the design and vary between Rs. 5 and Rs. 30 each. The cloth required is obtained locally, colours and chemicals also being purchased locally from dealers. The *karkhandars* get their orders from private individuals. They supply the cloth for printing to out-workers. During the slack season, some of them buy their own cloth for printing. The average monthly earnings of *karkhandars* come to between Rs. 100 to 120 in the case of smaller ones and from Rs. 200 to Rs. 250 in the case of those who employ more than 15 persons. The out-workers are paid at the rate of annas 10 to annas 12 per piece for printing the body of the cloth and from annas 2 to annas 3 per piece for printing the border. The *karkhandars* stated that they would welcome a co-operative society that would enable them to purchase the raw materials and cloth at cheaper rates. Recently this industry has begun to feel the competition of machine-printed cloth. In fact, it is stated that more and more mills are installing printing machines and that in consequence hardly 600 out of the City's 1,500 out-workers get enough work to maintain them for the whole of the year.

Hosiery.

23. There are about 1,500 persons employed in the hosiery factories at Ahmedabad. It is estimated that the annual output is worth about Rs. 12 lakhs, while the raw materials utilised are estimated to cost Rs. 9 lakhs. The raw materials used, are cotton and wool yarn, the cotton yarn being purchased from local mills while wool yarn is obtained from Bombay. The main products are underwears, sweaters, pull-overs and coats. The brisk season for underwears is summer while in the cold season there is more demand for woollen goods. The factory-owners complain of the competition of the hosiery manufacturers at Ludhiana. The manufacturers suggest that Government should start a Hosiery Institute for the demonstration of up-to-date methods.

Cotton Gins and Presses.

24. This is another important textile industry of Ahmedabad. The investigator interviewed a factory owner at Bavla and another at Dhandhuka. There is a great deal of complaint about internal competition in this industry. This problem has, it seems, been solved at Dhandhuka by the five factory-owners combining and agreeing to work only 2 factories in the slack season and dividing equally the profits obtained. This has saved them the ginning and pressing charges. It was stated that each owner received Rs. 1,280 as his share of the profits during 1937-38.

Ironware.

25. The ironware industry may be considered from the point of view of some of its products to be a new industry. The investigator interviewed 5 manufacturers of whom one specialised in the making of trunks,

one in that of safes and one in that of cup-boards. The fourth manufactured safes, cup-boards and locks, while the fifth was engaged in making buckets and containers for storing grain. These five manufacturers employed about 65 workmen between them and the average wage per worker came to more than Rs. 30 per mensem while individual wages varied according to skill from Rs. 20 to Rs. 60 per mensem. The manufacturers who were interviewed, state that their industry is in a fairly flourishing condition, though they are afraid of over-production, a trunk manufacturer pointing out that whereas there were only five or six concerns ten years back, there are now 18 such concerns in his trade and the tendency is still one of increase. Of the finished products, the iron containers and buckets have a local and district market, while the trunks have an inter-provincial market. The raw material used is mainly Tata iron, though in trunk manufacturing, English iron is also used. Almost all the manufacturers suggest that Tatas should sell the iron-sheets direct to them so that they could avoid the commission charged by the agents of Tata goods. It is also suggested that Government should help the industry by getting a reduction in the railway rates on the transport of raw materials used by them.

Mill Machinery Parts.

26. The making of mill machinery parts is an important industry in a textile centre and may be considered to be one of the new occupations which modern industrialisation has opened up for the blacksmiths. The investigator interviewed three such manufacturers. Two of them employed 16 persons and the third 8. The articles made are twist wheels, pinions and other spinning and weaving machine parts. The cost of the equipment required by them varies from Rs. 4,000 to Rs. 6,000, and consists of slotting and drilling machines, cutters, files, lathes, etc. The equipment is mostly of old pattern, and the manufacturers expressed their desire to go in for improved machinery, but stated that they did not have the means to do so. Orders are obtained directly from the mills or mill-agents or the mill store suppliers. The labourers are paid on an average Rs. 30 to Rs. 35 a month. The manufacturers stated that their monthly income varied from Rs. 125 to Rs. 180 according to sales.

Brass and Copper-ware.

27. It is estimated that there are 300 to 350 artisans working in brass and copper-ware in Ahmedabad. Most of them are working in *karkhanas* while some are outworkers who work at home for the *karkhandars*. The artisans in this trade are paid on piece rates; it appears from the investigator's inquiries that the artisans are getting Rs. 30 to Rs. 40 a month. Detailed inquiries were not made into this trade.

Motor Body Building.

28. It is reported that there are four *karkhandars* in the City of Ahmedabad who are engaged in building bodies of motor buses and lorries. The investigator interviewed 2 of these. One employs three carpenters and one blacksmith who are paid daily wages varying from Rs. 1-12-0 to Rs. 2-4-0. He has an equipment worth Rs. 500. He builds about four motor bodies in a month and gets about Rs. 380 for each. His net earnings are estimated to amount to Rs. 110 to Rs. 120 a month. The other motor-body builder employs about 5 workers, and his equipment is stated to be worth Rs. 2,500. He also builds about 4 bodies in a month and earns about Rs. 120 a month.

Coach and Cart-making.

29. There are about 12 to 13 *karkhandars* in the City of Ahmedabad who are engaged in building coaches. The total number of persons, employed by them is estimated to be 40. Two of these *karkhandars* who were interviewed, stated that they were following this as their hereditary occupation. One of them does not employ any outside labour. His sons who work in the mills during day, help him at night. He has an equipment stated to be worth about Rs. 300. He usually builds two coaches and one cart in a year and earns about Rs. 150 on the same. His main occupation, however, is repairing work, from which he gets about Rs. 70 to Rs. 75 a month. He stated that some years back he used to build 8 to 10 coaches and 5 to 6 carts in a year and employed half-a-dozen artisans. But to-day his industry is much affected by the fall in demand. The other coach-maker in addition to working himself, employs an artisan from October to May, and pays him daily wages at the rate of Rs. 1-8-0. His equipment is worth about Rs. 200. He stated that a coach cost him Rs. 95 to make and was sold at Rs. 160. It thus seems that he is able to earn about Rs. 65 for each coach. Though he can make one coach a month, he usually makes only two to three coaches a year. His main occupation is doing repair work which gives him from Rs. 700 to 800 a year. It is reported that formerly there were 30 coach-makers at Ahmedabad but to-day there are only 12 to 13 and even these subsist mainly on repair work.

30. One of cart-makers at Dholera was interviewed. He employs two artisans and a boy. He is able to make three carts in a month, but actually makes only 12 carts in a year. The wood is bought on credit. He gets Rs. 600 for the 12 carts that he makes and as his cost comes to Rs. 432, his net earnings from cart-making are Rs. 168 for the year. In addition, he does repair work and gets about Rs. 318 in a year. His equipment cost him Rs. 100. The price of carts is reported to have fallen during recent years and this is considered to be due to the decline in the cultivators income as also to the setting up of more centres of cart-making.

Patara (WOODEN-BOXES) MAKING.

31. One maker of *patara* or wooden boxes was interviewed by the investigator at Dholera where there are reported to be four *patara*-makers. He is following the trade as his hereditary occupation. He makes 50 *pataras* in a year for which he gets Rs. 550. As his raw materials cost him Rs. 450, he earns an annual income of Rs. 100 from his occupation. The equipment is said to have cost him Rs. 100. It is pointed out that *patara* making is not now a paying industry as steel trunks are being used on an increasing scale. The *patara*-makers have, therefore, taken to cart-making or repair work to supplement their income.

FURNITURE MAKING.

32. This seems to be a growing industry at Ahmedabad. It is estimated that there are about 22 large and 75 small concerns engaged in this industry in the City of Ahmedabad. The investigator interviewed three of these furniture-makers. One of them employs about 30 to 35 persons and manufactures tables, cots, cup-boards, chairs, etc. His equipment is worth Rs. 3,000 while the cost of its repairs comes to Rs. 300 a year. He estimates the value of his annual output at Rs. 36,000, the cost of his raw materials at Rs. 17,000 and his other charges for wages, rent, etc. at Rs. 14,600. He had no grievances or complaints to make and stated that his industry was in a good condition. The second furniture-maker who was interviewed was a small *karkhandar*. He employs two carpenters, who are paid daily wages at Rs. 1–12–0 each, one polisher who is paid at the rate of Rs. 1–4–0 per day and a boy for general help who is given Rs. 7 a month. His equipment cost him Rs. 150, and its repair charges come to Rs. 25 a year. According to his own statement he earns an income of about Rs. 65 a month. The third furniture-maker has a partner and employs six artisans and an apprentice; he himself and his partner also take a very active share in the work. The cost of his equipment is placed at about Rs. 500 and his repair charges at Rs. 100. The value of his output comes to about Rs. 12,000, the cost of the raw material to Rs. 7,000 and that of other charges for wages, rent, etc., to Rs. 3,000. Carpenters are paid daily wages at the rate of Rs. 1–8–0 each. His figures seem to show a profit of about Rs. 2,000 for the two partners, though he himself claims that the income does not come to more than Rs. 60 a month for each partner.

33. It seems that this branch of the carpenter's trade is in a fairly good condition. A suggestion was made in the course of the interview by the furniture-makers that modern journals on decorative and home furnishing trades giving latest designs, patterns, etc., should be made available to them.

At Dholera the investigator interviewed a carpenter who made tables and wooden legs for cots. It was his hereditary occupation and he claimed to make an income of Rs. 200 to Rs. 250 a year. His equipment was valued at Rs. 35 and his estimated annual cost of repairs was Rs. 5 to 6.

Tanning.

34. The tanning industry does not appear to have obtained much success in Ahmedabad, it being reported that 2 or 3 tanneries which were started had all failed. There is, however, to-day the Ahmedabad Chrome Tanning Company, a factory which seems to be flourishing. It is reported that the water and weather at Ahmedabad are not suitable for good tanning. The factory also complains about the unsuitability of their site. It is estimated that there are about 10 tanneries at Dhandhuka, 5 at Bavla, and 100 at Dholka. Dholka seems to be a good tanning centre, and the tanners interviewed in that place expressed a great desire to see a modern tannery opened in their place. They were anxious to learn the details of the lime process in tanning which resulted in the production of softer and more polished leather. The average monthly earnings of the persons engaged in this trade appeared to be Rs. 10 to Rs. 12.

Gut-making.

35. There are a few artisans in Ahmedabad who prepare guts. One of them, who was interviewed, was making guts for which he obtained Rs. 1,270 a year. His net income came to Rs. 310 per year or about Rs. 25 a month, and his entire family helped him in his occupation. He stated that there was a good demand for guts but all the waste materials from the slaughtered cattle in Ahmedabad were taken away by dealers who exported them to England. The gut-maker had, therefore, to obtain the raw materials required by him from the United Provinces and the Punjab, and had to pay high prices for them. He pointed out that whereas five years ago the price per hundred intestines was Rs. 2 to Rs. 3 it was now Rs. 10 and the result was a large reduction in the number of families who were engaged in making guts. He wanted some arrangement to be made by which it would be possible for all of them to obtain intestines in Ahmedabad itself. The gut-worker in question also pointed out that he did not know how to colour the guts, and required some training, to enable him to prepare guts suitable for tennis racquets.

Leather Industries : Roller Skins.

36. It appears that about 10 to 12 men are employed in this industry in Ahmedabad, and the value of their output comes to Rs. 10,000. The local mills, however, are consuming a much larger quantity of roller skins which are mostly imported from abroad. The indigenous roller skins are much cheaper but the foreign ones are reported to be much superior in quality.

37. One of the manufacturers who was interviewed seemed to be earning about Rs. 500 a year by making roller skins. He employs four artisans of whom three are paid Rs. 25 per month and one Rs. 20 and pays a rent of Rs. 25 per mensem for his *karkhana*. The raw materials

utilised by him annually consist of goat skins worth Rs. 5,300, 10 tins of fat at Rs. 5 each and 100 tins of castor oil at Rs. 5-8-0 per tin. He prepares 200 dozen roller skins in a year and sells them at Rs. 15 per dozen. In addition he sells leather laces, oiled as well as dry, worth Rs. 4,800. The leather wastage which is sold to the shoe repairers yields him about Rs. 100 a year. Another person who was interviewed employs two artisans, and produces roller skins worth Rs. 4,000 a year.

Leather Industries, Pickers.

38. This is another new industry connected with leather started in Ahmedabad. The investigator interviewed two manufacturers of pickers, one of whom employed 42 persons and the other 50. One of the two persons interviewed is wellknown in the trade. He started that he obtains sperm oil and colour from England and wire from Germany and Belgium. The buffalo hides are obtained from the United Provinces, the Punjab and the North West Frontier Province. It is stated that slaughtered buffalow hides are not available locally in sufficient quantities and the hides of dead buffaloes are not suitable for the industry. Moreover, hides in the United Provinces and the Punjab are dried on frames, whereas in the Gujarat they are dried on the ground, with the result that weight of the hides is increased on account of the adherence of clay. It was suggested that a change in this practice might perhaps lead for a better utilisation of the local supply.

39. For the preparation of pickers, the buffalo hides are first soaked in water, then a paste of lime, sodium sulphide, etc., is applied for dehairing. Then the hides are cut into pieces of suitable size called "Pharma", which after being pressed three times, are punched and steeped in sperm oil for about 2 months, after which they are ready for sale as pickers. The cost of this manufacturer's equipment was estimated to be Rs. 10,000 and it was all locally made. The volume of output is said to be 2,000 gross of pickers per year, which are sold at about Rs. 60,000. He makes pickers for cotton, jute and silk mills. The industry is seasonal because during the monsoon, the weather is not suitable for manufacture. The manufacturer has agents who get orders, and he also supplies to mills and mill store suppliers; 30 per cent. of his sales are local, while 70 per cent. are sent outside. He sells on 42 days' credit and gives a discount of 1½ per cent. if paid in cash. He claims to get a return of 4 to 5 per cent. on the value of his sales. The machinery employed by him is not up-to-date. The workmen are paid wages on piece-work basis. The average wage bill is reported to be Rs. 1,000 per month, which gives an earning of nearly Rs. 24 per worker employed by him. It is estimated that there are in Ahmedabad 6 manufacturing concerns employing about 250 to 300 persons, who are engaged in making pickers. The volume of total output is estimated at 12,000 gross of pickers worth about Rs. 3·6 lakhs.

40. The main complaint of the manufacturer was that the local mills to a large extent patronised foreign pickers despite their higher price. It was stated that employment would greatly increase in this industry if all the mills in Ahmedabad used the pickers manufactured locally. He also desired Government to provide financial facilities by which he could provide himself with improved machinery and thus reduce his cost.

Oil seeds crushing.

41. The investigator interviewed two persons working on hand-*ghanis* in Modasa. It is estimated that about 50 *ghanis* work there during the working season. The cost of a hand-*ghani* is about Rs. 25 to Rs. 30 while the maintenance charges of a bullock come to Rs. 7-8-0 a month. A *ghani* worker is able to crush 45 to 50 maunds of sesame seeds in a month. This costs him Rs. 107. The monthly output of oil comes to about 20 maunds and oil cakes about 30 maunds and the price realised is stated to be Rs. 100 for oil and Rs. 200 for the cakes. This seems to leave him only Rs. 13 a month as earnings inclusive of the charges of maintenance of the bullocks. One of the *ghani* workers interviewed had a small piece of land from which he is able to get the fodder for his bullocks. He estimates his income at Rs. 10-8-0 a month for eight months in the year. Both he and his wife work on the *ghani*. During the agricultural season, both of them work on their piece of land which yields them about Rs. 50 a year.

42. The other worker interviewed, does not buy his own oil-seeds, but works to order. He gets 3 annas per maund of oil-seeds and crushes about 40 maunds of oil-seeds in a month. This gives him an income of Rs. 7-8-0 a month for about nine months in a year. From this income, he has to meet the charges of maintenance of the bullocks. He is able to do so because he also works on his cart. According to him, his total annual income comes to Rs. 122 of which Rs. 68 is from the *ghani* and Rs. 54 from cartage. The cost of maintaining his bullocks is said to be about Rs. 50 a year. It seems, therefore, that he gets a net annual income of Rs. 72.

A number of persons in Modasa submitted a memorandum to the Committee's investigator complaining about the competition from oil mills. They also said that the advent of lorries had reduced their income from cartage, while rice-husking and flour mills had deprived the women of their important occupations.

Soap making.

43. Prantij was known for its soap industry, and even to-day soap making is in a flourishing condition in that place. It is reported that there are three big *karkhandars* and two small *karkhandars* in Prantij producing soaps worth Rs. 2,20,000, the raw materials employed costing from Rs. 1,70,000 to Rs. 1,80,000. One of the leading soap manufacturers of the place employs about 25 persons who are paid daily wages

varying from annas 5 to Re. 1–4–0 each. He reported that last year, he prepared soap worth Rs. 16,000 and earned a profit of Rs. 2,000. Mainly *gola* soap used for washing purposes, is manufactured and marketed at Ahmedabad. The raw materials consist of *mahura* oil, soda and lime. Crude soda is available in good quantities in Prantij while the *mahura* oil is obtained from Modasa. It appears from the statement of the person interviewed, that his sales are increasing. There is also an important soap making industry in Ahmedabad City. The investigator interviewed three manufacturers who prepare toilet and washing soaps. The raw materials used are lime, castor oil and other oils, washing soda, etc. The industry is seasonal as some of the processes cannot be carried on during the monsoon. The labourers work for about 8 to 10 hours a day and are paid from 4 to 6 annas a day. It is estimated that there are 4 to 5 big factories in Ahmedabad and 15 to 20 small concerns. Of the three soap makers interviewed, one obtained an income of more than Rs. 100 a month, another about Rs. 100 to Rs. 120 a month, while the third got an income of Rs. 45 to Rs. 50 a month. The All India Village Industries Association has started a soap-making industry at Ahmedabad and two *Harijans* are employed who obtain a decent income from the same. The soap-makers at Ahmedabad complain about the high rates of railway freights for the raw materials used by them.

Paper making.

44. There are at present reported to be only 2 families at Ahmedabad working in this industry whereas formerly there were estimated to be 600 families producing hand-made paper. The fall in number is ascribed to the severe competition from machine-made paper, both foreign and Indian. The artisans assert that their paper is more lasting and is very good for records. They claim that their paper can even last a hundred years, and state that due to the absence of any encouragement from Government, Municipalities and the public they suffer.

45. The chief raw materials are waste-paper, soda, soap and bleaching powder. The yearly consumption of waste-paper comes to 960 maunds worth about Rs. 2,540. Bleaching powder, soap, starch, etc., cost about Rs. 1,100 a year. The output per year is estimated at 7,200 *gha* (of 24 sheets each) worth Rs. 7,650. It is said that ten years ago, the production was 20,000 *gha* and the prices were also double those of to-day.

46. One of the two producers prepares 300 *gha* of paper in a month; the second one also produces the same quantity. But the paper made by the former is unglazed and fetches annas 12 per *gha* while the paper made by the latter which is glazed fetches Rs. 1–6–0 per *gha*. Each of these producers employs an artisan and two labourers. All adult members of the family also work. The artisan is paid Rs. 1–8–0 for ten *gha* of paper which is usually made in a day and the labourers who are unskilled workers are paid daily wages at 12 annas each. The monthly earnings of each family are estimated to be between Rs. 30 and Rs. 40.

47. They state that they are capable of producing more, but do not do so on account of the lack of demand. They think that Government can help them by encouraging the hand-made paper industry. At present, only some of the Kathiawar States use this paper. They feel sure that with Government and public patronage, the industry will once again prosper. They, however, complain of the severe competition of machine-made paper which though cheaper, is less durable; and want some sort of protection against this competition so that their industry can prosper.

Ink.

48. There is only one ink manufacturer at Ahmedabad. His yearly output is estimated to be worth Rs. 3,600 and the raw materials (colours, chemicals, bottles, etc.) worth Rs. 1,500, per year. His present investment amounts to Rs. 3,000 or thereabouts.

At present his chief customer is the Ahmedabad Municipality. His market is mostly local but orders are also received from outside. He exhibits his products at fairs and exhibitions. He estimates his profits at about 8 to 10 per cent. of his investments.

49. His chief complaint is against foreign and Bombay inks. He maintains that the foreign inks are neither better in quality nor cheaper in prices. All the same, people go in for these, because they have a better packing, and are very well advertised. He thinks that the Government can help him by making available the initial capital at a low rate of interest. He also finds the rates of advertising too high. He wants the help of technicians and also encouragement from schools, mills and Government Departments. He suggests that the Government should test and certify the quality of inks produced by Indian manufacturers so as to create confidence in the public regarding their products.

Lime Kilns.

50. It is reported that there are about 7 lime kilns in Prantij, each employing about 3 labourers. The total annual output is estimated at about 2,000 *brass* valued at Rs. 30,000. It is significant to note that 75 per cent. of this lime is consumed by the local soap factories. The individual who was interviewed stated that he brings about 200 *brass* of lime-stones from the lime quarry. The lime quarry is worked by contractors who allow lime-kiln owners to take lime stones on payment of Rs. 6 or Rs. 7 per *brass*. Sand is obtained from river beds. The industry suffers from internal competition as a result of which prices have gone down considerably.

Bakeries.

51. The investigator interviewed only one bakery-owner at Ahmedabad. The individual produced biscuits and bread. His main complaint was of fierce internal competition. He expressed a wish that this may be stopped by forming a syndicate or association of all bakeries in the city.

Ayurvedic Medicines.

52. At Modasa, the Gandhi Pharmacy manufactures Ayurvedic medicines from herbs, etc. The industry is carried on with manual labour. The Pharmacy gives employment to 8 men who work throughout the year for 8 hours a day. The total wages paid annually come to about Rs. 1,000. Raw materials consisting of herbs, mineral products, etc., worth about Rs. 2,000 are utilised every year and the sales of the products amount to Rs. 7,000 a year. They suffer from the competition of machine-made drugs both Indian and foreign. They want Government to test and certify the quality of ayurvedic medicines and further help the industry by giving it full publicity. They feel that without encouragement from Government, there are no bright prospects for their industry.

Tulsi Beads making.

53. This small industry is found only at two places in the district—Bagad and Khas. At Bagad which is the larger centre, 50 artisans are engaged in this industry. *Tulsi*-beads have an inter-provincial market, but the annual production does not exceed Rs. 1,800 in value. A hundred beads cost only 2 annas. The beads are made on ordinary lathes. The wood is obtained locally, and the annual cost of wood utilised in this industry does not exceed Rs. 500. The artisans engaged in this industry earn only about Rs. 70 to Rs. 100 a year. They take therefore to subsidiary occupations, mostly to agriculture.

It is reported that the number of artisans engaged in this industry is increasing though there has not been a corresponding increase in demand. Prices consequently have gone down considerably due to the internal competition and the artisans are getting less and less profits.

Possibilities of New Industries.

54. There appear to be very few raw materials in the district which await exploitation. The forests are poor and the minerals available are not many. Ahmedabad, however, being an important centre of the textile industry, there seems to be much scope for the manufactures of bobbins, and shuttles, sizing and finishing materials, mill machinery parts, etc. Similarly, it should be possible to develop such leather industries like the manufactures of roller-skins, washers, pickers, belting, etc. There seem also some possibilities of utilising on cottage industry basis, the nitrous earths found at Dholera and Viramgam for production of saltpetre, and the crude soda found at Prantij for the further development of the soap industry at that place. It is also worth considering whether some of the old established cottage industries like paper-making, which are at present practically dying out, cannot be revived.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

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Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

AHMEDNAGAR

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With

the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable storehouse of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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AHMEDNAGAR.

Position and Area.

The district of Ahmednagar lies between 18° 20′ and 19° 59′ north latitude and 73° 37′ and 75° 41′ east longitude and occupies an area of 6,611 square miles. It is bounded on the north by the Nasik district, on the east by the Nizam's Territory, on the south by the Sholapur district and on the west by the Poona and the Thana districts.

Physical Features.

2. Except in the east, where the Dominions of the Nizam surround Jamkhed Mahal and run inwards to within ten miles of Ahmednagar city, the district is compact and unbroken. The Western Ghats extend along a small portion of the western boundary and throw out spurs eastwards into the heart of the district. The valleys between these spurs of the Western Ghats form the beds of the Pravara and Mula rivers. Except near the centre of the eastern boundary where hills rise to a considerable height, the surface of the district eastwards becomes gradually less broken. The chief river of the district is the Godavari which runs for about 40 miles along the north and north-east boundary. The other rivers in the district are the Pravara, the Mula, the Sina, the Ghod and the Dhora. The Bhima river flows in this district for about thirty-five miles and forms the boundary between this district and the Poona district.

Climate and Rainfall.

3. The climate is on the whole genial. In the cold season the air is dry and envigorating. The hot season begins in February and lasts till the middle of May, and from that date till the monsoon breaks, the weather gets sultry and oppressive. During the monsoon the climate is temperate and pleasant. Rainfall varies considerably in the district. In the hilly villages of west Akola it is as high as two hundred inches while at Akola the average rainfall is only twenty-one inches. The average rainfall for the district as a whole is about 22 inches.

Population.

4. The district has a total population of 988,206 persons of whom 889,546 live in rural areas consisting of 1,350 villages while the remaining 98,660 are to be found in 7 towns. The more important towns are :—

	Population.
Ahmednagar (including Cantonment) ..	57,529
Sangamner	15,355

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The proportion of the urban population to the total population is about 10 per cent.

According to the Census returns of 1931 the total number of principal earners in the district is 360,910 of whom 265,391 are males. The occupational distribution of this total number is as follows :—

Exploitation of animals and vegetation	279,349
Exploitation of minerals	9
Industry	38,099
Transport	2,171
Trade	11,964
Public force and Administration	9,872
Professions and liberal arts	4,780
Persons living on their income	783
Domestic service	4,945
Insufficiently described	4,527
Unproductive	4,411
Total ..	360,910

The proportion of the industrially occupied persons to the total principal earners is 10·5 per cent. But in addition to the 38,099 persons shown as engaged in industrial occupations according to Census classifications, there are 11,176 persons engaged in stock-raising, 1,327 persons engaged in forestry and 835 persons engaged in fishing. Though these have been included in the Census returns under "exploitation of animals and vegetation" they are engaged more or less in industrial occupations. The total number of persons in the district engaged in industrial occupations of different kinds can, therefore, be taken as 51,437.

Health and Medical Facilities.

5. The mean ratio of births per thousand for the five years ending 1937 was as high as 44·03. The mean ratio of deaths for the same period was 27·35 per thousand thus giving a survival rate of 16·68 per thousand.

There is only one hospital maintained by Government in Ahmednagar town. Of the twenty dispensaries in the whole of the district, twelve are maintained by the District Local Board, six by a Mission, one by the Poona Seva Sadan Society and one by a municipality. The total number of doctors in the district are 57 and of these 29, or more than half, are in Ahmednagar town. In the district excluding Ahmednagar town the proportion of doctors to population comes to one doctor for about 33,800 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 59,475 persons have been returned as literates, which constitutes a literacy percentage of nearly 6 for the whole district. Next to the West Khandesh and Belgaum districts, this district has the lowest percentage of literacy in the whole of the Province.

The educational facilities available in the district are summed up in the following statement for the year 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary Schools	852	54,228
Secondary (including lower secondary and English teaching) Schools..	12	2,527
Commercial, Industrial and Agricultural Schools ..	7	264

Of the 1,350 villages in the district, only 654 villages had schools in them.

Transport Facilities.

7. The Dhond-Manmad line of the Great Indian Peninsula Railway is the only railway line in the district. It joins the Calcutta and Madras railways and runs through the centre of the Ahmednagar district. The district is well served by roads, the important ones being connected with the railways by feeder roads. The total length of roads maintained by the Public Works Department and the local authorities is 805 miles of metalled roads and 379 miles of unmetalled roads.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 4,242,462 acres of which 2,992,236 acres constitute the gross cropped area. Current fallows constitute 335,284 acres. Forests occupy 492,130 acres while other uncultivable land measures 468,418 acres. There are 34,549 acres which are returned under culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification of crops of the cultivated area :—

	1937-38. Area in acres.
Rice	21,394
Wheat	184,016
Jowari	980,342
Bajri	851,108
Ragi	25,710
Maize	1,418
Gram	100,254
Other food grains including pulses	293,975
Linseed	25,019
Sesame (*til*)	19,015
Groundnuts	25,077
Others	147,165
Condiments and spices	5,761
Sugarcane	15,767
Cotton	201,860
Other fibres	8,773
Tobacco	2,249
Fodder	69,040
Fruits and vegetables	13,766
Other miscellaneous crops	527
Total ..	2,992,236

The important commercial crop of the district is cotton which accounts for a considerable portion of the cropped area. The other important commercial crops are sugarcane, linseed and groundnuts. The staple food crops are jowari and bajri.

Fruits and vegetables accounted for an area of 13,766 acres in 1937-38. More details regarding these crops were obtained from the Department

of Agriculture which supplied the following information in respect of 1938-39 :—

	Acres.
Vegetables—	
Potatoes	738
Sweet potatoes	485
Carrot	500
Onions	840
	2,563
Green vegetables—	
Fenugreek	1,658
Edible hibiscus (*Bhendi*)	65
Musk melon	161
Water melon	190
Others	695
	2,769
Fruits—	
Plantain	295
Mango	329
Lime	482
Sweet lime	5,056
Orange	616
Pomegranate	195
Guava	613
Papaya	195
Grapes	63
Others	71
	7,915
Total, Fruits and Vegetables ..	13,247

The district has 69,040 acres under fodder crops. In parts of Akola and Sangamner talukas where there is a fair amount of natural grazing, some good specimen of cattle are bred. The Akola breed is known as the *Dangi*, while the Sangamner breed is akin to the *Mhasvad Khillari* type.

There are no important breeds in the other parts of the district. According to the Census of cattle taken in 1934-35, the details of live-stock in the district are :—

Bulls and Bullocks (breeding, working and young stock)	386,761
Cows do. do. ..	312,632
Buffaloes do. do. ..	13,791
Cow-buffaloes do. do. ..	54,770
Sheep and goats	415,138
Horses and Ponies	18,088
Donkeys	6,564

Of these, the milch cattle number 235,438, consisting of 200,633 cows and 34,805 cow-buffaloes. This district has the largest number of cows in the whole of the Province.

Survey of Resources : Minerals.

9. The Gazetteer states that coarse agates and carnelian like stones are found at Katul and near Ahmednagar city. Agates are also reported to be scattered over the Karjat sub-division. Crystallised quartz of various colours are reported to occur in the vicinity of the hill fort of Harischandergad. Trap suitable for building stone is found all over the district not only in quarries but a few feet under the surface. Basalt is found near Ahmednagar and Dongargaon while limestones occur in large quantities to the north of Ahmednagar fort, at Samgamner, Arangaon and other places. The Sangamner and Arangaon lime-stones are reported to be purer than the others. The district, on the whole, does not seem to be particularly rich in mineral resources.

Survey of Resources : Forests.

10. The total area under forests is 492,130 acres of which the larger portion is to be found in the talukas of Akola and Sangamner. The hill forests belong to three classes : the lower slopes, the central region and the evergreen western forests. The lower slopes contain mostly bushes, scrub trees, *khair* and *dhavda* trees. The central region mostly contains teak. It is treated as coppice, the demand being chiefly for poles and rafters. *Dhavda, khair* and some kinds of underwood are also grown in this region. The evergreen western forests consist mainly of trees like the *anjan*, bamboo, mango, *jambul*, etc. The minor forest products include grass, *harda, babul* pods, tamarind berries, etc.

Survey of Resources : Power.

11. There are two electric supply companies in the district. The figures for their output are given below :—

—	Units generated.	Total Units sold.	Units sold for industrial purposes.
Ahmednagar Electric Supply Company Limited	315,417	247,974	132,845
Sangamner Electric Supply Company Limited	100,634	73,020	11,453

Survey of Resources : Capital.

12. There were 165 agricultural societies in the district in 1937–38 and their total working capital amounted to more than Rs. 11 lakhs. There were also 20 non-agricultural societies with a working capital of Rs. 22·62 lakhs. Besides these co-operative societies, there were 88 post office savings banks in which there were 10,142 accounts current in 1937–38 with a balance of Rs. 423·08 lakhs. During the same year postal cash certificates to the extent of Rs. 5·21 lakhs were sold in the district. There is also a branch of the Imperial Bank of India at Ahmednagar.

Industries in the District : General.

13. The population engaged in industrial occupations has been estimated at 51,437 persons including the 13,338 persons engaged in stock-raising, forest industries and fishing. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	263
Butchers	443
Tailors, milliners, etc.	1,488
Washing and cleaning	1,084
Barbers, hair dressers, etc.	2,153
Scavenging	512
Total ..	5,943

The remaining 45,494 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest Industries	1,327
Stock-raising	11,176
Fishing	835
Cotton ginning, cleaning, etc.	112
Cotton spinning, sizing and weaving	6,844
Rope, twine, etc., making	3,070
Wool carding, spinning and weaving	682
Dyeing, bleaching, etc.	111
Working in leather	134
Carpenters	2,895
Basket makers	729
Blacksmiths, etc.	1,316
Workers in brass, copper and bell-metal ..	332
Potters, etc.	2,067
Manufacture and refining of vegetable oils ..	1,360
Makers of sugar molasses and *gur*	631
Sweetmeat and condiment makers	434
Boot and shoe makers	4,344
Lime burners, cement workers, etc.	3,358
Makers of jewellery and ornaments	1,660
Other miscellaneous industries	2,077
Total ..	45,494

Of these, 1,976 workers were employed in concerns coming under the Indian Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and Local Fund ..	1	1	13	17
Food, drink and tobacco ..	1	....	330	....
Chemicals, dyes, etc. ..	....	1	....	Not stated.
Paper and printing ..	....	2	....	69
Processes connected with hides and skins	1	2	47	72
Seasonal factories	59	113	1,586	4,119
Total ..	62	119	1,976	4,277

14. The investigator, Mr. N. M. Joshi, spent about a fortnight and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during this stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The handloom weaving industry is spread over many centres in the district and continues to be the most important. The investigator studied the condition of this industry at Ahmednagar, Sangamner, Pathardi and Bhingar. His general impression is one of unrelieved gloom. Both from the point of view of output and prices of the products, conditions appear to have steadily deteriorated during the last 10 to 15 years. Thus for example, it was estimated that there were nearly 3,500 looms at Sangamner in 1910–11. When Mr. Telang made his survey in 1928 the number had gone down to 2,000. According to the investigator, to-day there are not more than 800 looms at that centre. Conditions at other centres are not far dissimilar. In Bhingar, for instance, the number of looms was 1,000 in 1932. It is reported to be not more than 480 now. It is also estimated that the imports of yarn into Ahmednagar City which were valued at Rs. 5 lakhs about 10 years back have now gone down to nearly Rs. 2 lakhs.

16. Along with the fall in the number of looms there have been large reductions in the prices of the *sarees* and the remuneration received by the weavers. The *nagari saree* with real silk border which very easily fetched Rs. 8 in 1925 does not even fetch Rs. 3–8–0 now. And a Sangamner wage-earner who was getting Rs. 1–4–0 per piece in 1920 has now to work for 4 annas on a similar piece. One very noticeable outcome of this deterioration in economic conditions is the disruption of the *kārkhanas*. Out of the 40 families, whose condition was studied in detail by the investigator at Ahmednagar, only three had more than four looms. Similarly out of the 132 families at Bhingar about whom information was collected, only one had more than five looms. A result of this has been a lowering of *saree* prices. In many cases the independent artisans have to sell their produce to local dealers at any price to satisfy their daily want for bread. As for the wage-earners they are generally leaving their ancestral occupation to work as casual labourers in mills or in the fields. Most of the weavers are heavily in debt. It is estimated that the 193 weavers' families of Sangamner are indebted to the extent of Rs. 1,50,000. This indigent condition of the weavers is stated to be mainly responsible for the failure of the various weavers' co-operative credit societies started in the district.

17. A characteristic of the handloom centres in the Ahmednagar district about 15 years back, was the specialisation of different centres in different designs. In Ahmednagar city the weavers mostly

concentrated on the *nagari* type of *sarees* whereas the Sangamner producers produced the *band* variety and the Pathardi *Salis* specialised in *shahpuri* border *sarees*. Whereas such an arrangement had its own advantages at that time, to-day the competition from machine production and change in taste have brought to the forefront new problems. The Ahmednagar weavers, for instance, have seen their markets slip away before their eyes due to the production of cheap *sarees* with *nagari* designs by the Dhulia mills. Similarly, whereas in 1925 almost all the looms at Pathardi were producing *shahpuri* border *sarees*, now there is hardly any demand for this garment. In Sangamner too the production of *band sarees* by the Dhulia and Chalisgaon mills and the shift to some extent in rural demand from *band* to fancy *patals* have brought very different problems before the weavers. Their poverty, illiteracy and conservatism make it difficult for them to adjust themselves to new conditions. And a few of those who realise the necessity of a change and try to adjust production to demand find immense difficulties in their way. Some of them cannot afford to go in for the necessary equipment. For example, there are about 40 weavers at Ahmednagar who can weave fancy *patals* but have no dobbies to help them in their work. Moreover, the dealers in *sarees* come in the way by refusing to pay cash for these new types.

18. At present the daily output of *sarees* at Sangamner is 200 during the brisk season and 125 in the slack. Of this, cotton *sarees* of the *band* variety form 66 per cent. and the rest consist of silk bordered *sarees*. Recently a few looms have begun to produce fancy *patals* and *dhotees*. At Bhingar about 135 *sarees* are produced in a day. The counts of yarn used are 20s and 40s. Artificial and real silk are also utilised. At Bhingar, cotton yarn from 20s to 32s, and mercerised yarn of 2/60s, 2/64s, 2/80s, 2/84s are used. In addition, artificial silk of 80s, 100s, 125s (both single and double) and real silk are used. The main products from these are *bhingari sarees, ilkal sarees* and fancy *patals*. At this place there is a *punch* for certifying the quality of the product and about 20 per cent. of the product is stamped by the *punch*; such stamped product is said to be readily marketed.

19. In all the handloom centres of the district the product is sold to the local dealers from day to day. About ten years back the dealers used to take the *sarees* of the district to Khandesh and Berar. But the Dhulia, Amalner and the Chalisgaon mills have displaced entirely the handloom products from these areas. At present the product is mainly marketed within the district but a part is also sent to Nasik.

20. A difficulty facing some of the weavers is to finance the production and marketing of specialised and new products. Some designs like *Ilkal sarees* are demanded in good numbers during the marriage season, i.e., during the months of March, April and May but the products have to be hypothecated with dealers at heavy cost. To improve the deplorable condition of the weavers of the district, Government have started, with the co-operation of the weavers, a District Industrial Association. At present the Association has 500 members and owns about 175 looms. Its activity is mostly centred in the Ahmednagar

city and the average annual production is valued at Rs. 20,000. The products of the members are marketed by the Association and the weavers get about 6 to 8 annas a day. With a view to shift production from the traditional products, the demand for which is steadily dwindling and to make the district self-supporting in other lines of piece-goods production, the Association encourages the production of *dhotees*, shirting, coating, etc. This has improved the situation in two ways : the producers of the *nagari sarees* are getting some relief as there is less production in that variety, while the other weavers are also now getting better wages by weaving new types of designs.

21. To put the handloom industry on its legs, the weavers demand protection against mill and powerloom production. They feel that so long as coloured *sarees* are produced on machinery without hindrance the handloom industry can never hope to compete with these products on an equal footing. They suggest, therefore, that Government should prohibit the powerlooms from producing *sarees* or that Government should put a heavy tax on powerloom production to equalise prices. Further, they want Government to supply them the right type of yarn for warp and weft together with a guarantee for its quality and quantity, at low rates, so that the middlemen can be eliminated. The weavers also demand that the municipal taxes on imports of yarn at some places should be removed. They want to be supplied with improved appliances and to be trained to produce new designs to meet changing demand. At some places the weavers desire training in dyeing yarn. Another suggestion is about the use of *Dharmadaya* funds. According to the Secretary, Weavers' Union, Sangamner, the dealers at present deduct as much as 1 anna per cotton *saree* and 4 annas per silk *saree* for charity purposes. These charity funds are at the dispcsal of the dealers and it is alleged that they are not used for their avowed objects. It is suggested that the funds should now be taken over by Government by legislation and used for the reconstruction of the handloom industry. The other demands are : (1) redemption from past indebtedness, (2) representation of weavers on the provincial legislatures to safeguard the interests of the industry, and (3) a special marketing organisation for marketing their products.

Brass and Copperware Industry.

22. This is an important industry of the district though at present it is not in the same flourishing condition that it was some 20-25 years back. About 20 years ago, it is stated there were fifteen prominent dealers and about 100 *karkhanas* engaged in the manufacture of brass and copper articles and the total number of persons who subsisted on this industry was nearly 1,000 ; to-day it is reported there are only five to six prominent dealers and 15 to 20 *karkhanas*, while the number of artisans subsisting on this industry is said to be about 150.

23. The dealers supply raw materials to the artisans who work in their own workshops and return the finished articles to the dealers. In return for their work the artisans are paid on the basis of fixed rates

according to the nature of the metal worked in. The raw materials are mostly imported from Bombay. They consist of brass and copper sheets, *bhangar* (scrap metal), zinc, tin, etc. The cost of transport comes to about Rs. 1-4-0 per cwt. Besides this they have to pay *octroi* duties. These raw materials are distributed between different artisans. Usually about 15 to 20 maunds of raw materials are given to each artisan who prepares and returns the necessary products in about a month. The contract rates at which the work is given are usually Rs. 5 per maund of bell-metalware, Rs. 3-8-0 per maund of brassware and Rs. 3-4-0 for copperware. Sometimes the rates offered are even less. The artisan has to account to the dealer for every maund of the raw material supplied to him. Sometimes these artisans are advanced their wages up to 50 per cent. of their anticipated earnings. The different types of products manufactured at this centre and their selling prices are stated to be as follows :—

	Rate per 13½ seers.
	Rs. a. p. Rs. a. p.
Brass—	
Pateli	10 8 0 to 11 0 0
Kadhayi	9 8 0
Pitali	10 8 0
Tapeli	12 8 0 to 13 0 0
Pali	10 0 0 to 10 8 0
Copper—	
Kalashi	16 0 0
Gund	16 8 0
Ghangal	16 8 0
Bell-metal—	
Plates	19 8 0
Cymbals	18 8 0 to 19 0 0
Bells	19 0 0

Most of the dealers stated that they made very little profit out of their trade.

24. Some of the contract workers were themselves dealers some years back but due to adverse conditions they now accept work from other dealers on contract basis. They employ labourers who are paid at rates varying from 8 annas to 12 annas per day. The raw material is brought from the dealers. The equipment in the workshop consists mostly of hand tools worth Rs. 300 to Rs. 1,000 according to the size of the workshop. All the tools are locally manufactured. A workshop employing about eight workers can prepare articles weighing about

2½ maunds in a day while another workshop where only 3 members of the family worked produces about one maund of articles in a day. From 20 maunds of metal sheets 16 maunds of finished articles are prepared and the remaining 4 maunds of cuttings are returned to the dealer. The cost of preparing the 16 maunds of utensils is reported to be about Rs. 16 or on an average one rupee per maund. This artisan reports that he gets Rs. 2 per maund from the dealer for his work. Thus his earnings come to about Rs. 16 for a fortnight or Rs. 30 to Rs. 32 per month. The products are sold in local markets and are also exported to Khandesh, Berar and the Nizam's Territories. A few years back, they were also exported to Madras, United Provinces, Delhi, etc., but these markets are now closed. There is keen competition from machine-made articles which are reported to be cheaper and to present a more attractive appearance ; this has practically restricted the scope of the markets for the handmade products of this district. There is also competition from aluminium wares but this is not so keenly felt as it is stated that aluminium ware is not now so popular because of its defects. Due to these causes, the production in this centre has fallen very low. The total production of Ahmednagar to-day is estimated to be worth only about Rs. 1½ lakhs per year whereas 25 years back the production is stated to have been worth as much as Rs. 25 lakhs. The dealers want Government to show them the way to improve their industry and trade. It has been suggested that new types of products might be introduced by training the artisans, that adequate financial help might be given to the *karkhandars*, and that marketing facilities might be afforded to the dealers.

25. In addition to these dealers and artisans engaged in the manufacture of brass and copper utensils, there are reported to be about 2 workshops which specialise only in rolling the metal sheets. This industry is said to have been started during the last war, when prices of brass and copper sheets reached prohibitive levels. The local dealers and artisans began to get their metal melted and rolled into sheets, particularly in the case of the manufacture of brass pots from *bhangar* (scrap metal) and of bell-metal pots from scrap bell-metal. To-day the depression affecting the local brass and copper-ware industry has considerably reduced the demand for these rolled sheets. It is now reported that the rolling machines have to remain idle in the slack season for nearly 25 days in a month. Owing to these causes, one of the two workshops maintaining rolling machines is reported to be doing no business for the last two years.

26. Besides these artisans, there are a few others who do only repair work, i.e., renew old utensils. One such artisan interviewed by the investigator, employs two assistants whenever the work is heavy and does the work on contract at the rate of Rs. 2-8-0 to Rs. 3 per maund. He specialises in repairing only brass pots. The average monthly turnover is stated to be about 15 to 20 maunds. The tools and equipment cost about Rs. 150 and the repair charges thereon come to nearly Rs. 10 annually. The two assistants who work for 8 to 9 hours a day are paid

12 annas a day for beating the metal and 8 annas a day for polishing it. The net earnings of the artisan after paying all expenses are reported to be about Rs. 16 per month. It is stated that there has been a considerable fall in the wages earned by these artisans and that unless the economic condition of the general public improves there is no future for this industry.

Sugarcane Crushing Industry.

27. The Ahmednagar district has the largest area under sugarcane crop in this Province. There are four large factories in the district which are engaged in the manufacture of sugar. Besides these large-scale factories there are many agriculturists, big and small, who are engaged in the preparation of *gur* from sugarcane. The investigator interviewed a few *gur* manufacturers at Kopergaon. Some of them are using power crushers which cost from Rs. 3,000 to Rs. 12,000 according to horse power. The non-power crusher is said to cost about Rs. 500. The extraction capacity of the crushers worked by power varies from 65 per cent. to 70 per cent. and that of the non-power crusher is about 62 per cent. The cost of raising one acre of sugarcane crop is estimated at Rs. 523 while that of preparing *gur* out of the same quantity of sugarcane is placed at Rs. 138. The outturn is on an average 50 *pallas* of *gur* for one acre of sugarcane. The cost of preparing one *palla* of *gur* thus comes to Rs. 13. The cost of transport, commission, depreciation, etc., charges come to approximately 10 annas per *palla*. The selling price of *gur* is reported to be about Rs. 18 per *palla*.

Tanning Industry.

28. There are 2 fairly modern tanneries equipped with machines and several small hand-worked units in the district. The investigator visited some of the latter at Ahmednagar, Pathardi and Rahuri. The tanner interviewed at Ahmednagar, is paying Rs. 40 per month as rent for his tanning ground measuring 150′ × 250′. He purchases his raw materials from Bombay, Kalyan, Bhiwandi, etc. The rate for hides and skins varies considerably. Buffalo hides are reported to cost from Rs. 120 to Rs. 150 per twenty, and bullock and cow hides from Rs. 60 to Rs. 100 per twenty. The cost of transport is said to come to Rs. 1-4-0 to Rs. 1-8-0 per maund, the weight of 20 hides being roughly 3 maunds. The other raw materials required are lime, myrabolams and *babul* bark. The process of tanning takes about a month. The total investment so far, in the equipment of the workshop, on the tanning pits, etc., is reported to be about Rs. 3,000 while the cost of tools alone is said to be Rs. 50. All the processes are done by hand, no machinery being

employed. The cost statistics of tanning 20 buffalo hides and 20 bullock or cow hides as supplied by him are as follows :—

	20 buffalo hides.			20 cow or bullock hides.		
	Rs.	a.	p.	Rs.	a.	p.
Lime	1	8	0	1	8	0
Babul bark	20	0	0	12	0	0
Myrabolams	15	0	0	7	0	0
Wages	11	0	0	10	0	0
For stitching, etc.	0	8	0	0	6	0
Total ..	48	0	0	30	14	0

Most of his hides are only half-tanned and sold at varying rates depending on the rates for raw hides. The investigator states that the annual sales of this tanner amount to about 1,000 hides. On an average he appears to earn from the tanning business, about Rs. 300 to Rs. 400 a year after meeting all costs. Besides tanning of hides, the artisan also prepares leather *mots* (water-carriers). About 100 *mots* are prepared and sold every year. It is stated that the same artisan sold thrice this quantity of *mots* ten years back but due to the keen competition from iron *mots*, the leather *mot* industry has been very much affected. The leather *mots* are sold for Rs. 8 to Rs. 15 per *mot*. The cost of preparing *mots* of the type which are usually sold for Rs. 15, is said to be Rs. 225 per 20 *mots*. This leaves a margin of Rs. 75 of which Rs. 20 are paid out as wages and Rs. 55 retained by the artisan. On the basis of figures supplied by the artisan himself, he gets about Rs. 275 a year from his business of preparing *mots*. In addition to the three family members, 14 workers are engaged by him. Out of these 7 are women who work on piece-work basis and 7 are men who work for nearly 8 hours a day and are paid wages varying from Rs. 10 to Rs. 20 per month. The artisan reports that he has to face competition from the local *Dhors* who are also engaged in tanning hides. Regarding the tanning factories he has no complaint as they are said to be specialising in making compressed soles and dyed uppers.

29. At Pathardi the tanners are all small artisans. There are, it is reported, some five or six families engaged in this industry. Their methods are crude and very old. The raw hides are purchased locally for prices varying from Rs. 90 to Rs. 100 per 20 hides. The cost of tanning these 20 hides is said to be Rs. 30 and the selling price Rs. 150. Thus for every twenty hides tanned, each family gets about Rs. 20 to Rs. 30. The investigator reports that on an average about 4 to 5 hides are tanned per month. The tanned leather is sold in the local markets. Besides tanning and selling the skins and hides, the artisans

also prepare leather *mots*. One *mot* is prepared in about two days. It costs Rs. 11 to make it and it fetches about Rs. 12 leaving a margin of one rupee per *mot* to the artisan.

30. There are stated to be only two families of tanners at Rahuri. Each house maintains two tanning pits and tans a considerable quantity of hides for six months in a year. As in other centres, here also the tanned leather is very crude and rough and is used for making *mots* or for soles of shoes, *champals*, etc. Here the cost of raw hides which are mostly of bullocks and cows varies from Rs. 60 to Rs. 90 per score and the tanned leather is sold for Rs. 130 per score. After meeting the cost of tanning, each family is estimated to earn about Rs. 30 per score of hides which requires a month for tanning. The *mots* prepared at this centre are sold for Rs. 8-8-0 each. The cost of 20 *mots* is stated to be about Rs. 170, inclusive of Rs. 20 for wages. The tanners thus do not earn any profit on the *mots* but only get their wages. Each family is said to prepare about 5 *mots* a month, and earn Rs. 5 as wages. The total earnings per family per month come to Rs. 35 from both the sale of tanned leather and leather *mots*. This work is carried on only for six months from September to March and during the remaining six months they work for the agriculturists in exchange for fixed quantities of grain. The work consists of preparing whips, straps, belts, etc., and of repairing the *mots*. Usually each family gets about 8 to 9 maunds of grain per year from this kind of work.

Boots and Shoes.

31. In Ahmednagar City, there are nearly 25 shops where boots and shoes are manufactured. Each shop also imports boots, shoes, *champals*, rubber and canvas shoes, etc., from outside to the extent of Rs. 1,200 per annum and sells them in retail. Apart from these shops there are about 15 families of *mochis* specialising in the production of *vahanas* and *jodas*.

32. The equipment of a shop is worth about Rs. 100 and consists of a sewing machine worth about Rs. 50, some lasts worth about Rs. 20 to Rs. 30 and a few ordinary tools. In the shops where boots and shoes are manufactured, two to three artisans are generally employed. The workers are paid a piece rate of 10 to 12 annas per pair of shoes, and the daily output of the whole shop is 2 to 3 pairs. The product is sold locally. In recent years the margin of profit left to the owner of the shop has considerably lessened. It is pointed out that about 10 years back the dealers used to make a profit of Rs. 15 to Rs. 18 on every 20 pairs of shoes and slippers; to-day the margin is only about Rs. 5 to Rs. 7-8-0. The condition of the producers of *vahanas* and *jodas* is reported to be still worse. There is practically no demand for *jodas* and their production is rarely undertaken. The artisans are thus forced to rely only on *vahanas* and *champals*. Twenty pairs of *vahanas* can be prepared by an artisan family in seven days and for doing so, they get a remuneration of about Rs. 2.

33. The whole trade in locally produced boots and shoes is in a depressed condition. The *mochis* cannot develop an export trade in shoes and slippers for want of finance. Mutual co-operation amongst the *mochis* themselves is also lacking. They request Government to give them finance at low rates of interest and also request that good quality leather should be supplied to them at cheap rates.

Production of Lime.

34. The Pemgiri hills are reported to be rich in lime. The *ramoshis* of the locality exploit the hills, burn the lime and sell it to the dealers. They find this a convenient subsidiary industry during the non-agricultural season. Their chief problem, however, is that the sugar factories there have established their own kilns to meet their requirements of lime and no longer purchase their supply from the artisans. The lime workers desire that these companies should purchase through them and should not directly exploit the lime resources. This would help them to add to their meagre income from agriculture. The number of lime kilns worked are 4 and they give employment to about 100 people.

Possibilities of New Industries.

35. The district has nearly 9,000 acres under fibres other than cotton and there seems, therefore, to be much scope for the commercial utilisation of these fibre resources. At Ahmednagar Rev. Loy Long assisted by a grant from the Department of Industries has been making successful attempts in the utilisation of the fibres. At Pemgiri, there was, it is reported a flourishing glass-bangle industry some years back. The Pemgiri hills are reported to contain raw materials useful for the preparation of glass. The possibility of reviving the glass bangle industry at this place seems worth further investigation.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

BELGAUM

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the limited staff

and funds at their disposal," the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BELGAUM.

Position and Area.

The district of Belgaum lies between 15° 22′ and 16° 58′ north latitude and 74° 2′ and 75° 25′ east longitude and covers an area of 4,612 square miles. It is bounded on the north by the States of Miraj and Jath; on the north-east by the Bijapur district; on the east by the States of Jamkhandi, Mudhol, Kolhapur and Ramdurg; on the south and south-west by the districts of Dharwar and Kanara, the State of Kolhapur and the Portuguese territory of Goa; and on the west by the States of Sawantwadi and Kolhapur. The lands of the district are greatly interlaced with those of the neighbouring Indian States.

Physical Features.

2. The country forms a large plain studded with solitary peaks and broken here and there by low ranges of hills. The most elevated portion of the district lies to the west and south along the line of the Sahyadri Hills or Western Ghats. The surface of the plain, slopes with an almost imperceptible fall eastwards to the borders of Bijapur. On the north and east the district is open and well-cultivated but to the south it is intersected by the Ghats, thickly covered in some places with forest.

The main rivers are the Krishna, the Ghatprabha and the Malprabha, all running from west to east. None of them is serviceable for navigation.

Climate and Rainfall.

3. The moderate heat, the early and fresh sea-breeze and its altitude above the sea make Belgaum pleasant and healthy. The most agreeable climate is found in a tract parallel with the crest of the Western Ghats between the western forests and the treeless east. The rainfall averages about 50″. In the east it is as low as 25″, while at Chandgad in the extreme west, about 103″ are recorded in a year.

Population.

4. The district has a total population of 1,076,701 persons of whom 949,956 live in rural areas consisting of 1,080 villages, while the remaining 126,745 are to be found in nine towns. The important towns are :—

Belgaum	41,204
Nipani	17,857
Athni	13,561
Gokak	11,866

The proportion of the urban population to the total population is about 11·8 per cent.

According to the Census returns of 1931, the total number of principal earners in the district was 294,201 of whom 249,491 were males. The occupational distribution of the total number is as follows :—

Exploitation of animals and vegetation	211,095
Industry	31,126
Transport	2,085
Trade	14,648
Public force and Administration	6,970
Professions and liberal arts	3,662
Living on their income	288
Domestic service	1,352
Insufficiently described	18,346
Unproductive	4,629
Total ..	294,201

The proportion of industrially occupied persons to total earners is about 10·5 per cent. But not all the 211,095 persons shown against " exploitation of animals and vegetation " are engaged in cultivation. That figure can be further analysed as follows :—

Cultivation	202,887
Forestry	283
Stock-raising	7,635
Fishing, etc.	290

Thus 8,208 persons are engaged in forest industries, stock-raising and fishing, etc. and can for purposes of this survey be taken as industrially occupied. With this addition, the total number of principal workers engaged in different industrial occupations comes to 39,334 for the whole district.

Health and Medical Facilities.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births for the five years ending 1937 was 40·03 per thousand while the mean ratio of deaths for the same period was 27·49 per thousand. The survival rate for the district thus comes to 12·54 per thousand, which is the highest among the Karnatak districts.

The district has five hospitals, nine dispensaries and two other medical institutions. Of the five hospitals, one at Belgaum town is maintained by Government, the remaining four being conducted by missions or

private institutions. Of the nine dispensaries five are maintained by the municipalities and four by the District Local Board. The two other medical institutions, a maternity home and an infant welfare centre, are conducted by a private institution and the Red Cross Society respectively. There are 92 doctors in the whole of the district, but about 51 are in the town of Belgaum itself. The proportion of doctors to the total population in the district excluding Belgaum town comes to one per 25,330 persons.

Literacy and Educational Facilities.

6. According to the Census of 1931 there are 64,232 persons who are returned as literates in the whole of the district; in other words the percentage of literacy in the district is only 5·9. Excepting the West Khandesh district where the corresponding figure is 5·8, this district appears to be the most backward in the Province so far as literacy is concerned.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	No. of Institutions.	No. of Pupils.
Primary schools	754	60,958
Secondary (including lower secondary and English teaching) schools ..	26	4,427
Industrial, commercial and agricultural schools	....	....

Of the 1,080 villages in the district, only 504 villages had schools in them.

Transport Facilities.

7. The Madras and Southern Maratha Railway crosses the district from north to south. At Londa, the line meets the Mormugoa branch by which large quantities of products are taken to the sea. It must be noted, however, that important industrial centres of the district like Nipani and Bailhongal are not served by rail; they are, however, connected with the Madras and Southern Maratha Railway line by road. Some of the important roads in the district are : (1) the Poona-Bangalore road which runs right through the centre of the district, (2) the Vengurla Road leading from Belgaum to the sea through the Sawantwadi State, (3) the Belgaum-Saundatti Road, and (4) the Darur-Gokak and Telsand-Savalgi Roads in the scarcity areas. The total length of metalled and unmetalled roads maintained both by the Government and the local authorities is 564 miles and 359 miles respectively.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 2,937,751 acres of which 1,910,482 acres constitute the gross cropped area. Current fallows constitute

333,896 acres. Forests account for 450,001 acres while other uncultivable land is 220,035 acres. Culturable land or land which is theoretically available for cultivation is 53,075 acres.

The following table gives classified statistics of the cultivated area by different crops :—

	Area in acres. 1937–38.
Rice	120,236
Wheat	140,364
Barley	1,976
Jowari	618,076
Bajri	148,290
Ragi	34,049
Maize	12,956
Gram	39,213
Other food grains including pulses	225,882
Linseed	3,721
Sesame (*til*)	2,194
Groundnut	96,193
Castor seed	733
Other oil-seeds	41,315
Condiments and spices	23,940
Sugarcane	13,006
Cotton	178,205
Other fibres	8,832
Tobacco	57,705
Other drugs and narcotics	863
Fodder	132,125
Fruits and vegetables	10,426
Other miscellaneous crops	182
Total ..	1,910,482

It will be seen that *jowari* is the main food-crop of the district, though *bajri*, wheat and rice are also grown in considerable quantities. Among the commercial crops, cotton, groundnuts and tobacco are more important. Next to Kaira district, this district has the largest area under tobacco cultivation.

Fruits and vegetables accounted for 10,426 acres in 1937-38. More details were obtained regarding these important crops from the Department of Agriculture which supplied the following statistics in respect of 1938-39 :—

	Area in acres. 1938-39.
Vegetables—	
Potatoes	270
Sweet potatoes	3,353
Carrot	847
Onions	1,047
Others	38
	5,555
Green vegetables—	
Edible hibiscus (*Bhendi*)	173
Others	2,270
	2,443
Fruits—	
Plantain	1,224
Mango	842
Guava	329
Others	160
	2,555
Total, Fruits and Vegetables ..	10,553

The area under fodder crops was 132,125 acres in 1937-38. The forests also have good grazing areas. In the forest tracts of Khanapur and Belgaum, cattle of inferior quality are bred by *Dhangars*. Bullocks of various breeds are found in all parts, the best breeds being imported from South Kathiawar and Mysore. Of the local breeds, *Nagdi* are the most useful and hardy. Buffaloes of good breed do not thrive near the Western Ghats, but the *Gauli*, *Hanbars* and *Dhangars* of Sampgaon, Gokak and the eastern tract rear buffaloes of a good type. Sheep of two breeds : the *Kenguri* with soft red wool and the *Yelga* with white or black, are reared by *Dhangars* while four varieties of goats are generally found, the best breed being known as *Kuisheli*. Ponies of an inferior type and donkeys are kept mostly by *Vaddars* and other

low-caste Hindus. According to the Census of cattle taken in 1934-35, the details of live-stock in the district are as follows :—

Bulls and Bullocks (working, breeding and young stock)	..		212,308
Cows	(	do.	) .. 13,673
Buffaloes	(	do.	) .. 61,003
Cow-buffaloes	(	do.	) .. 194,896
Sheep and goats	..	..	.. 324,890
Horses and Ponies	..	..	.. 4,322
Donkeys	..	..	.. 2,792
Camels	..	..	.. 140

Of these, 187,191 are milch cattle consisting of 76,644 cows and 110,547 cow-buffaloes.

Survey of Resources : Minerals.

9. The Gazetteer mentions that in the sixteenth century Belgaum was known as a diamond market and states that part of the sandstone found on the Kolhapur side of the district is similar to the diamond sandstone found at Kadappa and other diamond fields. The geological conditions necessary for the development of gold are stated to be present in much of the Belgaum rock. The Gazetteer also states that gold was found near Chikop and Belevadi and that in these parts there were professional gold washers.

Similarly iron nearly equal in quality to Swedish iron is stated to have been made formerly near Kanur, Punare and Patne in Belgaum ; at Kaitnal and Tavaj in Gokak ; at Kitur in Sampgaon and near the Ram pass. The ore is stated to be generally peroxide of iron with a mixture of clay, quartz and lime. All the laterite of the district is reported to be charged with iron though in too small a proportion to make smelting worth while.

Stones of green basalt, gneiss, sandstone and laterite varieties are found throughout the district. Lime in general use is made from *kankar* of limestone which is found all over the district. At Yadvad in Gokak, bluish-grey lime stone is quarried and yields best lime for white-washing. Crystalline limestone is reported to be available in Southern Khanapur ; and the white clay found in Khanapur is said to be of high quality.

The Collector reports that manganese is found in certain parts of Khanapur and Sampgaon talukas. It is stated that two leases to work such mines were granted during the last two years but no considerable progress has been made owing to lack of demand for the ore.

Survey of Resources : Forests.

10. The total area under forest in the district is 450,001 acres. The forests yield timber, fuel, bamboos, sandalwood, *harda*, and charcoal. The fuel reserves in the Khanapur taluka supply fuel to the Madras and Southern Maratha Railway and to various mills. The forests have good grazing areas and are able to supply large quantities of grass in times of fodder famine.

Survey of Resources : Power.

11. There are two electric supply companies in the district and the figures of their output and distribution of electrical energy are as follows :—

	Units generated.	Total units sold.	Units sold for power purposes.
	(000s).	(000s).	(000s).
The Belgaum Electric Supply Company ..	512	444	273
The Nipani Electric Supply Company ..	67	52	9

Survey of Resources : Capital.

12. In 1937–38, there were 220 agricultural co-operative societies in the district with a total working capital of Rs. 18·64 lakhs. Non-agricultural co-operative societies numbered 41 and their working capital amounted to Rs. 24·93 lakhs. The District Central Co-operative Bank had during the same year a working capital of Rs. 21·36 lakhs. In addition, there were 83 post office savings banks in the district with 15,038 accounts current at the end of 1937–38. The balance outstanding to the credit of these accounts amounted to Rs. 25·2 lakhs. The sale of cash certificates during the same period amounted to Rs. 6·2 lakhs. The Bank of Citizens and the Bank of Belgaum have their head offices at Belgaum while the Canara Industrial and Banking Syndicate has a branch at the same place.

Industries in the District—General.

13. The population engaged in industrial occupations has been estimated at 39,334 including the 8,208 persons engaged in forest industries, stock-raising and fishing. Of these the following classes of

industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	125
Butchers	317
Tailors, milliners, etc.	1,882
Washing and cleaning	1,037
Barbers, hair-dressers, etc.	1,398
Scavenging	243
Total ..	5,002

The remaining 34,332 may be regarded as persons engaged in industry. The Census tables give the following details of this number :—

Forest Industries	283
Stock-raising	7,635
Fishing	290
Cotton spinning, sizing and weaving	5,429
Rope, twine and other fibres	601
Wool carding, spinning and weaving	2,472
Silk spinning and weaving	160
Dyeing, bleaching, etc.	119
Working in leather	696
Carpenters, turners, etc.	2,963
Basket makers, etc.	1,270
Blacksmiths and other workers in iron	1,150
Workers in brass, copper and bell-metal	394
Potters and makers of earthenware	1,673
Manufacture and refining of vegetable oils ..	361
Rice pounders and huskers	230
Grain parchers	109
Boot, shoe, sandal, etc., makers	1,843
Lime burners, cement workers	4,176
Makers of jewellery and ornaments	1,467
Other miscellaneous industries	1,011
Total ..	34,332

Of these, 4,531 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement

gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively:—

	No. of factories.		No. of workers.	
	1931.	1938.	1931.	1938.
Textiles	2	3	3,063	2,204
Engineering	..	3	..	50
Food, drink and tobacco	1	3	8	30
Chemicals, dyes, etc.	1	2	90	105
Paper and printing	..	4	..	55
Processes regarding wood, stone and glass.	1	3	18	48
Processes regarding skins and hides ..	..	1	..	33
Miscellaneous	..	1	..	17
Seasonal factories (cotton gins and presses).	30	34	1,352	1,221
Total ..	35	54	4,531	3,763

14. The investigator, Mr. S. M. Muzumdar, spent 15 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The investigator visited three handloom centres in the Belgaum district: Belgaum town, Gokak and Bailhongal. It is estimated that there are 600 handlooms in Khasbag at Belgaum, 500 in Gokak and about 500 in Bailhongal. In Belgaum, the investigator interviewed five persons of whom four are independent artisans and one an employer. Both *khans* and *sarees* are produced in Belgaum, but more weavers are engaged in the production of *khans*. The yarn used is of 60s for the *khans* and also for *Ilkal sarees*. But for the *Chandrakali saree* the yarn used is of 30s for warp and 20s for weft. China silk is also used for the borders. The independent artisans are reported to be getting an income of only Rs. 3 to Rs. 4 a month. Many of them are using throw-shuttles

and explain their doing so on the ground of inability to purchase the fly-shuttle looms. They suggest that finance for the purpose should be provided by the Government and further that Government should find market for their *sarees*. The employer who was interviewed owns four fly-shuttle looms and seven throw-shuttle looms. On an average he produces 450 *khans* and 32 *sarees* per month. The *khans* are made on the throw-shuttle looms and the *sarees* on the fly-shuttle looms. Piece wages are paid, at the rate of Rs. 3 for 33 *khans* for weaving which a wage-earner requires about a fortnight. About 11 men and six women are employed in the *karkhana*, the women being engaged for preparatory processes. According to this *karkhandar*, there are in all about five *karkhandars* at Belgaum owning more than 5 looms each, and the rest are all independent artisans. The main complaint is about the fall in the price of *khans*; this is stated as being partly due to over-production and partly to changing fashions, particularly the growing popularity of blouses prepared from fancy cloth.

16. At Gokak, the investigator interviewed three independent artisans and one out-worker as also a yarn merchant. It is reported that out of the estimated number of 500 looms in Gokak, about 150 are owned by independent artisans and the rest are controlled by merchants. *Sarees* and *phetas* form the important articles manufactured at Gokak. As regards *sarees*, the counts of yarn used are 50s for warp and 20s for weft, together with China silk. One of the persons interviewed makes 75 to 80 *sarees* in a year and together with the output of *phetas* he claims to earn 4 annas each per day for himself and his two sons.

17. The *phetas* which are made in Gokak are mostly made to order. It is stated that the merchants give the weavers 26 tolas of silk at a fixed price. The weaver has to give him back a *pheta* weighing 24 tolas, two tolas being allowed as wastage. One of the persons interviewed, has 2 fly-shuttles and 5 throw-shuttles and produces 40 to 50 *phetas* in a year in addition to 75 to 90 *sarees*; while another weaver produces about 30 to 50 *phetas* in a year in addition to 50 to 60 *sarees*. At Gokak, there is a local Weavers' Society and advances are given by the society against hypothecated stock, interest being charged at 3 pies per month per rupee. The *sowcar* is reported to charge a much higher rate of interest. It is stated by the Weavers' Society that the consumption of yarn by members is steadily going down. This is stated to be due to the competition of mill-made *patals* and they urge that some restriction should be put on power-looms. It is further urged that raw materials should be supplied by Government who should also undertake the responsibility of marketing the products, the weavers being given a wage of 8 annas per day. Some weavers also suggest that power-looms should be prohibited from working, or alternatively that they should be heavily taxed, so that their competitive strength *vis-a-vis* the handloom may be diminished. Throw-shuttles are more in evidence at Gokak than fly-shuttles; this is sought to be justified on the grounds that fly-shuttles involve more expense and that their use would result in over-production.

18. At Bailhongal the investigator interviewed two independent artisans and one employer. It is reported that of the estimated number of 500 handlooms in that place, the majority are owned by independent artisans, there being only three or four *karkhandars*. The main output is of *sarees* and the counts of yarn used are mostly 30s for warp and 20s for weft, the two types of *sarees* commonly woven being *Gomeekati saree* and the *Murund saree*. An employer who was interviewed, owns 10 throw-shuttles on which he produces 20 *sarees* per week. He sells exclusively to two merchants in Belgaum. He complains about the enormous fall in the prices of *sarees*, and suggests that restrictions should be placed on power-looms. Of the two independent artisans who were interviewed, one is working along with his son, and between them they are said to earn about Rs. 10 per month. According to him, though immediately after the last War, the weavers were in a prosperous condition, they are today in a very depressed condition, and there is no future for the handloom weaving industry. The other independent artisan who was interviewed, seems to make an income of only Rs. 5 per month from this occupation.

Power-loom Weaving.

19. The investigator interviewed the owner of a power-loom factory at Belgaum. This gentleman owns 10 power-looms and employs 17 labourers. The counts of yarn used are 50s and 20s, and mercerised yarn of 2/84s. Only four looms are utilised for weaving *sarees*. The total output of *sarees* is about 400 a month and these are sold at Rs. 4–8–0 each. The remaining six looms are utilised for producing *panchas* (towels). About 500 pairs of *panchas* are woven in a month: and they are sold at 14 annas a pair. The production is irregular, the demand being brisk in the marriage and the harvesting seasons. Sales are for both cash and credit and full-time canvassers are employed. Wages paid, are on a piece-basis; each weaver is paid 4 annas per *saree*. For weaving *panchas* they are paid $\frac{1}{2}$ anna per yard. The owner bitterly complained about the competition from the Indian States like Sangli and Ichalkaranji where there is said to be no legislation restricting the hours of work, and wages are low. He states that because of the difficulty of disposing of more *sarees* he is keeping six looms working on *panchas* even though the profit margin in that line is very small. He suggests that some restriction should be placed on the products of power-looms in the neighbouring Indian States.

Calico Printing.

20. The investigator interviewed one employer, who is engaged in calico-printing. He employs six persons of whom one is an engraver, one a designer and four are labourers. His total equipment is said to have cost him Rs. 6,000. He obtains mill cloth from Bombay and Ahmedabad and also uses *khaddar* cloth for dyeing and printing. The cloth is purchased on credit and his sales too are largely on credit. He

employs one full-time canvasser and has a number of agents. The value of the cloth dyed by him is estimated at Rs. 10,000 to 15,000 a year, while that of printed cloth, at about Rs. 5,000. Wages paid, are Rs. 30 for the engraver and Rs. 25 for the designer per month while the labourers are paid a daily wage of 5 annas each. The owner complains that his business has suffered a great deal owing to the competition of another factory in Poona. He suggests that there should be fixation of marketing zones between the different calico-printing and dyeing factories. He also wants Government to assist him financially.

Brass and Copperware.

21. At Belgaum the investigator interviewed two employers in the brass and copperware trade and one out-worker. It is estimated that there are from 15 to 20 shops of brass and copperware in Belgaum and about 250 out-workers. There are no independent artisans. One of the employers interviewed employs 35 out-workers. His raw materials consist of brass and copper sheets, bell-metal and tin sheets and about Rs. 6,000 worth of these are purchased every month. His sales are stated to be worth about Rs. 20,000 a month. Sales are on both cash and credit. The workers are paid on a piece-basis. The other employer employs 15 out-workers and uses raw materials worth about Rs. 2,700 a month. His sales are said to be worth Rs. 4,000 per month and are made both on cash and credit basis. These employers mainly complain about (1) the heavy freight charges on raw materials imported by them, (2) the municipal duties both on imports of sheets and exports of finished goods, (3) the wide fluctuations in the prices of their raw materials and (4) the competition of machine-made products which is reported to be destroying their trade.

22. The out-worker who was interviewed, is assisted by his two sons and also by his wife. His tools are reported to have cost him about Rs. 100 and were made locally. The rate of work varies according to the type of articles prepared. Thus, in copper, for a *tapeli* Rs. 2 are received per maund, for a *handa* Rs. 2–2–8 per maund, for a water-heater (*bumb*) Rs. 2–2–0 per maund. For brassware, the rate is practically uniform at Rs. 2 per maund. The artisan states that if he gets full-time work, his income can come to Rs. 25 to Rs. 28 per month. But really speaking he does not get full-time work and his net income comes only to Rs. 20 per month. His main demand is that Government should fix the minimum rates for their work as the *karkhandars* are reported to be trying to lower these rates. He also wants some protection against the factory products.

23. The investigator interviewed one independent artisan at Gokak engaged in preparing brassware from moulds. It is reported that he gets work for six months only and for the remaining months he has no work at all. His work is mostly to meet orders from local dealers of brass and copperware. He prepares articles like *samai* (lamps), *niranjan* (small lamps), etc., which are mainly required for religious purposes. He attributes the fall in his output mainly to the growth of irreligiousness.

Rice Mills.

24. The investigator interviewed the owner of a rice-mill at Khanapur. About 800 bags of paddy are husked per month, and 6 bags are utilised for making flour. The work lasts only for three months and the gross monthly income comes to about Rs. 200. There are two supervisors who are paid Rs. 22 and Rs. 25 per month respectively while the three workers are paid Rs. 6, Rs. 10 and Rs. 12 respectively. The owner wants financial assistance so that he can also undertake the extraction of oil to supplement his income. He also wants Government to fix some standard rate for rice husking in order to prevent uneconomic competition between rice-mills.

Motor-body Building.

25. The investigator interviewed at Belgaum a *karkhandar* engaged in building bodies for motor cars, buses, etc. Nine persons are employed in the *karkhana* of whom two are supervisors and the rest are workers. The *karkhana* utilises local timber. Part of this timber is obtained from a local forest contractor and part from the Government saw-mills at Dandeli. Wages are paid on both monthly and daily basis. The monthly wages vary from Rs. 8 to Rs. 30 and the daily wages from 3 annas to 6 annas. It is estimated that there are five such workshops in Belgaum and there is said to be severe competition amongst them. A suggestion has therefore been made that Government should bring about some agreement regarding their rates of work.

Bricks and Tiles.

26. The investigator interviewed the manager of a company in Khanapur which specialises in the manufacture of bricks and tiles. It is stated that the clay of Khanapur is of a good quality. The moulds are prepared from June to October and the tiles are burnt from November to May. The Hoffman kiln is used. About 2½ lakhs of bricks are sold every year. The total investment in the concern is about Rs. 52,000. The cost of production, excluding supervision, depreciation and interest charges is reported to come to Rs. 26 per 1,000 tiles and Rs. 6-8-0 for 1,000 bricks. Wages are paid on a daily basis at the rate of 5 annas for women and 10 annas for men. The main complaint of this factory is about the heaviness of freight charges. It seems that formerly the factory used to send their tiles to Bombay, but now they are not able to send them beyond Gokak on the one side and Satara on the other, while tiles manufactured at Mangalore are able to move up to Bombay because of the lower freight charges by sea. It is stated that there has been a great fall in the demand as also in the prices of bricks and tiles. The third complaint is that though the clay of Khanapur is of a good quality, the cold breezes which set in November are said to affect the tiles which contract and often break. Such breakages are reported to be very heavy. It is therefore requested that Government should conduct special research

in this matter and find some remedy. Finally, it is stated that if financial assistance is available, it would be possible to start glazed pottery works in Khanapur. The other brick-maker interviewed is an employer who has 18 workmen. He has no kiln and uses *bhattis*. His total investment is estimated at Rs. 25,000. Sales per year are estimated at 1½ lakhs of tiles and one lakh of bricks. Wages are on a daily basis being five annas per woman and ten annas per man. The employer requests that Government should fix a minimum rate for bricks so that the fierce competition from individual potters who bring down the rates may be avoided.

Gins and Presses.

27. The investigator interviewed the owner of one ginning and pressing establishment in Bailhongal where 200 manual workers and 2 supervisors are employed. Wages are on a daily basis; the men are paid 6 annas a day while the women are paid 3½ annas per day. The employer suggests that some restrictions should be placed on the starting of new gins and presses so that there may not be competition between themselves.

Tanning.

28. The investigator interviewed two tanners at Belgaum, two at Khanapur and one at Nipani. Of the two interviewed at Belgaum, one states that he tans about 10 hides a month. The raw materials required are *babul* bark, *harda* and *chunam*. It is stated that his profits are, on an average, one rupee per tanned hide. The other independent artisan states that he tans on an average 12 hides a month and obtains a monthly income of Rs. 10. He complains of under-employment and states that he can tan 25 hides a month if he gets the chance. The main complaint of both the artisans is about the difficulty of getting good raw hides. The owner of the big tannery at Belgaum is said to have arranged with the Cantonment butchers to get all their hides and only those hides that are rejected by him are said to be available to these independent tanners. Moreover, the complaint is made that the butchers do not know how to flay their animals, and therefore spoil the hides. The tanners want that they should be taught chrome tanning and supplied with tanning material from the Government forests at concession rates. It is estimated that there are about 25 families in Belgaum who are doing tanning.

29. At Khanapur it is estimated that there are about 12 to 15 families with 25 workers who are engaged in tanning. One of the artisans interviewed tans 5 buffalo hides per month, which, according to him, gives him an income of Rs. 6. The tanners mainly complain about the difficulty of getting raw hides from the butchers at Khanapur. These butchers are stated to be all obliged to the big tannery at Belgaum which pays them advance amounts. The tanners suggest that a ban should be placed on the export of hides from Khanapur. They also want that financial facilities and knowledge of better methods of tanning should be made available to them.

30. At Nipani, it is stated, there are 50 to 60 families of tanners. One of the independent artisans interviewed tans 10 hides a month and these are sold for Rs. 30 to 35. Out of this he gets a net income of Rs. 10. Here also the main complaint is about the difficulty of getting raw hides. It is stated that the best raw hides from Nipani are taken to Belgaum, and only the rejections are left for local consumption. Secondly, the complaint is also made about the frequent fluctuations in the price of *harda*, and the artisans suggest that Government should sell them *harda* at a low and fixed price. They also want adequate water facilities for their work.

31. The proprietor of the big tannery at Belgaum was interviewed by the investigator. Here about 60 labourers are employed during the brisk period. The output of this factory was, during 1937, 13,622 tanned hides of which 90 per cent. were tanned on the vat method and 10 per cent. on the bag method. Most of this output was exported. The tanning material used is almost exclusively *tarwad* bark. The total investment in this concern is reported to be about a lakh of rupees while the annual sales are estimated at about Rs. 80,000. Wages are paid to the labourers at the rate of 4 annas to 6 annas a day but only half the men obtain work throughout the entire year.

Shoe-making.

32. The investigator interviewed two shoe-makers both of whom can be considered to be small employers, as, in addition to working themselves, they engage outsiders to assist them. One of them prepares per month about 25 pairs of shoes priced at Rs. 3 to Rs. 3-8-0 per pair, and about 125 pairs of *champals* priced at 12 to 14 annas a pair. He brings the chrome uppers from Bombay and buys the soles at Belgaum or Khanapur. It is stated that one artisan can prepare a pair of shoes in about $1\frac{1}{2}$ days. The instruments used are reported to have cost Rs. 150. In addition to their meals, the wage-earners are paid 4 annas a day. This employer claims to get an income of Rs. 20 a month. The other employer interviewed, has a brother and also employs three workmen to assist him. The total output per month consists of 75 to 100 pairs of shoes, 20 pairs of slippers and 100 pairs of *champals*. This is during the brisk season, and in the slack season the output is nearly half. Canvas shoes and Karwar *champals* are also stored and sales of the same amount to Rs. 100 a month. The two brothers claim to get a total income of Rs. 50 a month out of their trade. The workmen are given their meals and are paid 4 to 5 annas a day. It is estimated that there are 25 shops in Belgaum with 25 employers and 50 to 60 wage-earners, and about 30 independent artisans. The main complaints of the employers and artisans are: (1) the impropriety of the municipal *octroi* duty on imported chrome uppers, (2) the poor quality of the hides, due to animals not being properly flayed, and (3) the steady overcrowding in the profession, indicating the necessity for some sort of licensing.

Oil-seeds Pressing.

33. The investigator interviewed two persons at Belgaum working on country *ghanis*: one an employer and the other an independent artisan. It is estimated that there are about 50 *ghanis* in Belgaum, of which 25 are owned by independent artisans and the rest by employers. The employer, who was interviewed, employs three men and three women. His equipment consists of four *ghanis* and five bullocks. The *ghanis* are valued at Rs. 25 to Rs. 30 each, the bullocks at Rs. 40 to Rs. 60 each. The total daily maintenance charges of bullocks are stated to be about 4 to 5 annas. His monthly output is 150 maunds of *kusbi* (Safflower seed) oil and 150 maunds of *kusbi* oil-cakes. Sales are on both cash and credit basis. Wages are paid on a piece basis. His net income is estimated at Rs. 15 to 20 per month. His main complaint is about the mill-pressed groundnut oil which is said to be cheaper than the *kusbi* oil. The number of *ghanis* in Belgaum is stated to have declined due to this competition. According to him *kusbi* oil is much more nutritious and he wants that something should be done to continue in the Karnatak the present practice of using *kusbi* oil. The main requirements put forward by him are: (1) finance for storing *kusbi* seeds, (2) better technical guidance which would enable him to get a higher percentage of oil extracted from the seeds, and (3) abolition of *octroi* duties on the export of oil.

34. The independent artisan, who was interviewed, is helped by his wife for two to three hours during the day. His monthly output is 16 maunds of oil, and 16 maunds of cake. In addition, this man works as a carrying labourer and earns about 4 annas a day. During the agricultural season he hires out his bullock at 4 annas a day, the agriculturist having in addition to feed the bullock. His main complaint is about the competition of mills. He states that this competition is unfair as the mills gain by getting their raw materials cheap on wholesale basis and further they are able to give credit to the shop-keepers and secure their orders. He suggests, therefore, that the mills should be heavily taxed.

Bidi Making.

35. The investigator interviewed two big employers in the *bidi*-making trade at Nipani. It is estimated that there are 3 big *karkhandars* and about 20 small shops manufacturing *bidis* in that town. One of the persons interviewed employs 125 workers. Tobacco is purchased during the months of January to March and stocked. According to his statement he prepares one lakh of *bidis* a day, and pays wages at the rate of 10 annas per 1,000 *bidis*. Each worker is said to earn about 8 annas a day on this basis if he works for about 10 hours. The other employer has 135 workmen and prepares *bidis* on a large scale. The main

complaints made by these persons are about the freight charges, particularly on tobacco dust. It seems that there is a good market for this dust in Delhi and northern India for *hooka* purposes. But due to prohibitive railway freight rates, the *bidi*-makers are not able to send the tobacco dust there but have to sell it cheaply as manure for sugar plantations. Another complaint is about the growing competition of cheap cigarettes which are getting popular with the lower classes. The employers further complain about lack of capital and suggest that they should be advanced loans against their stock. There is also a general complaint about the absence of transport facilities from Nipani. It is pointed out that the nearest railway station is about 25 to 30 miles away from Nipani.

Toy-making.

36. Gokak is famous for its wooden toys and the investigator interviewed one small employer and one independent artisan who are engaged in this trade. The employer who was interviewed employs two wage-earners in addition to the two members of his family who assist him. He makes toy cocoanuts, grapes, etc., from wood. The value of his monthly sales is placed at Rs. 50. He claims to get an income of Rs. 20 to 25 from this business. It is stated that whereas there were about 15 families engaged in this work some years ago, there are only three families at present, with 10 to 12 workers. The independent artisan who was interviewed, is assisted by his two brothers in his work. The main requirements of these artisans are : (1) that Government should arrange to supply them regularly at concession rates the *holi* wood which is required in their trade, (2) that Government should open stores in Bombay and stock their goods, (3) that more publicity should be given to their products and (4) that some protection should be given against the severe competition of cheap Japanese toys. They admit that changes in taste are partly responsible for the decline in their sales. One of these persons who was interviewed, makes electric shades at the instance of the Department of Industries, and it has been suggested that the preparation of such new and marketable articles would revive the industry of these skilled craftsmen.

Pottery.

37. The investigator interviewed one potter at Khanapur. His monthly requirements are one cartload of clay and six headloads of wood. The clay was obtained from a Zamindar's land on payment of a fee of Rs. 2–8–0 per year, while the wood is gathered by his wife from the forest. He supplies pots and other articles to about 25 families in the neighbouring villages, from whom he received payment mostly in kind. The money value of his sales is placed by him at Rs. 1–8–0 per week and he says that his net income comes to Rs. 4 a month. It is estimated by him

that there are 15 such families in Khanapur, each having direct contact with about 25 customers. The main complaint is about the competition of aluminium vessels.

Bamboo-mats.

38. The investigator interviewed two bamboo-workers at Khanapur and one at Nipani. All of them, are independent artisans and prepare bamboo-mats. One of the Khanapur artisans who was interviewed, uses 50 bamboos per month, the bamboos being purchased at Rs. 10 to Rs. 13 per hundred. About $2\frac{1}{2}$ bamboos are said to be required to make one mat measuring $10\frac{1}{2}' \times 6\frac{1}{4}'$. Two workers can prepare two such mats if they work together for 11 hours a day. A mat usually fetches 9 annas. The bamboos are purchased on credit, interest being paid at the rate of 6 pies per rupee per month. The artisan states that there is now little demand for their mats because of the decline in carting and also because of the growing use of corrugated iron sheets. He wants municipalities and Government offices to use only mats.

39. The other Khanapur artisan is helped by his two sons in his work. He uses 15 bamboos a week priced at 2 annas to $2\frac{1}{2}$ annas each and to get them the finished products are mortgaged in advance to the bamboo dealer. His weekly sales amount to Rs. 4 and he estimated the income of his family at Rs. 8 per month. His complaints are similar to those of the other artisans. The total number of bamboo-workers at Khanapur is estimated to be about 16 or 17.

The basket-maker at Nipani uses about 18 bamboos a week, which he purchases at 2 annas a bamboo and his weekly sales amount to Rs. 4. His net income is estimated at about Rs. 6 per month. The total number of families in this trade at Nipani is estimated by him at 20. He also complains about the big fall in the demand for his products.

Kurmuri (Fried Rice) Industry.

40. The investigator interviewed one of the families at Khanapur who are engaged in *kurmuri* making. Seven members of the family including three children are engaged in this occupation. About 30 *paylees* of paddy are fried every week. The income of the family is estimated at Rs. 8 to Rs. 10 per month and it is estimated that there are 30 such families in Khanapur having in all 150 workers. The *sowcar* who supplies the paddy charges heavy prices for giving the same on credit and the persons interviewed represent that they should be given financial assistance so as to be free from the clutches of the *sowcar*. They also point out that the rice mills have spoiled their old business of husking paddy.

Possibilities of New Industries.

41. Among the possibilities for new industries may be mentioned the better exploitation of the tobacco resources of Nipani, the clay and silt resources of Khanapur and the skilled craftsmanship of the wood workers at Gokak. It has been suggested that the preparation of snuff can be undertaken on a large scale at Nipani. The clay at Khanapur is reported to be of a good quality and it is stated that there are possibilities of starting a glazed pottery industry at that place. Similarly the wood-workers at Gokak are known for their craftsmanship and it should be possible to train them in the manufacture of new and marketable articles. There is reported to be good scope in the district for the manufacture of such wooden articles like tool-handles, cot-legs, cradles, picture frames, etc. It has also been mentioned that Khanapur taluka forms an ideal place for starting many new industries using forest produce, in particular the manufacture of charcoal on a very big scale, as the Madras and Southern Maratha Railway runs through the centre of this tract and there are plenty of roads and many rivers having a constant supply of water. Further there is said to be ample raw material for the establishment of a paper mill in the same area as also of a match factory. Similarly Nipani where tobacco is available in large quantities should form a suitable place for establishing a cigarette-making factory.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

BIJAPUR

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders, and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small-scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BIJAPUR.

Position and Area.

The district of Bijapur lies between 15° 49′ and 17° 29′ north latitude and 75° 19′ and 76° 32′ east longitude and covers an area of 5,710 square miles. On the north it is separated by the river Bhima from the district of Sholapur and the State of Akalkot; on the east and south-east it is bounded by the Nizam's Dominions; on the south the Malaprabha river divides it from the district of Dharwar and the State of Ramdurg; and on the west it is bounded by the States of Mudhol, Jamkhandi and Jath. The district is very compact. There are only a few tracts of non-British territory within its borders.

Physical Features.

2. The district can be divided into three belts—the northern belt comprising the country north of the latitude of Bijapur; the central belt including the tract south of the Don river and the southern belt consisting of the portion south of the Krishna.

The northern belt is a tract of elevated billowy upland, treeless, gently rounded, and falling into narrow valleys to which cultivation is chiefly confined. The central belt contains the rich Don valley, the grainery of old Bijapur. The rich alluvial plain of Krishna forms the southern belt. This belt of country is crossed by two low ranges of hills and differs very greatly from the rest of the district.

The district has a number of rivers flowing through its territory; of these the most important are, beginning from the north, the Bhima, Don, Krishna, Ghatprabha and Malprabha, all large rivers flowing throughout the year, and excepting the Don, impassable in the rainy season except by boats. There are also many small streams. The water of the Don is too salty to drink but the other large streams supply drinking water of fairly good quality.

Climate and Rainfall.

3. Generally speaking, the climate is dry and healthy. It must be pointed out, however, that March and April are very hot months, temperature sometimes rising up to 109° F. As regards rainfall, the district is served by both the monsoons; in fact it gets only the fag-end of both, with the result that rainfall in the district is extremely irregular both in amount and distribution. The whole district, therefore, is liable to famine, excepting parts of Badami and Hungund. The average rainfall in the district is about 21 inches.

Population.

4. The district has a total population of 869,220 persons of whom 759,104 live in rural areas consisting of 1,112 villages while the remaining 110,116 are to be found in 8 towns. The more important towns are :—

Bijapur	39,747
Guledgud	16,756
Bagalkot	15,597
Ilkal	14,267

The proportion of urban population to total population is about 12·6 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 263,365, of whom 207,864 are males. The occupational distribution of this total number is as follows :—

Exploitation of animals and vegetation	186,506
Industry	35,002
Transport	1,091
Trade	13,485
Public force and administration	5,055
Professions and liberal arts	3,184
Living on their income	206
Domestic service	254
Insufficiently described	13,330
Unproductive	5,252
Total ..	263,365

The proportion of the industrially occupied persons to the total principal earners is about 13·3 per cent. But in addition to the 35,002 persons shown as industrially occupied according to the Census classifications, there are 246 persons engaged in forest industries, 6,501 persons engaged in stock-raising and 156 persons engaged in fishing. Though for purposes of Census classification they have been included under " exploitation of animals and vegetation ", they are engaged in more or less industrial occupations. Adding these, the total number of principal earners engaged in industrial occupations comes to 41,905.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births for the five years ending 1937 was 41·40 per thousand while the mean ratio of deaths for the same period was 31·46 per thousand. The survival rate for the district thus comes to 9·94 per thousand.

The district has only one hospital maintained by Government, two maternity and child welfare centres, and a leprosy clinic. All these are situated in Bijapur town. In addition there are 11 dispensaries in other district towns. Of these three are maintained by municipalities, and eight by the District Local Board. There are also three travelling dispensaries of which one is managed by the Red Cross Society and the remaining two by the District Local Board. There are about 42 doctors in the district of which 19 are in Bijapur town. Excluding Bijapur town, the proportion of doctors to population comes to one for every 37,368 persons. The medical facilities thus appear very inadequate.

Literacy and Educational Facilities.

6. According to the 1931 Census, 56,909 persons were returned as literates, thus constituting a literacy percentage of about 6·5 for the whole district.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	No. of institutions.	No. of Pupils.
Primary schools	676	44,518
Secondary (including lower secondary and English teaching) schools.	11	1,782
Industrial, commercial and agricultural schools ..	1	6

Of the 1,112 villages in the district, only 497 villages had schools in them.

Transport Facilities.

7. A branch of the Madras and Southern Maratha Railway runs through five talukas of the district which it traverses from north to south connecting with the Great Indian Peninsula Railway at Hotgi and the main line of the Madras and Southern Maratha Railway at Hubli. There are feeder roads connecting the principal villages and towns with

the railway and through roads coming from and passing out to other districts. The total length of roads maintained both by Government and the local authorities is 500 miles of metalled and 322 miles of unmetalled roads.

Survey of Resources: Agriculture and Pasture.

8. The district has a total area of 3,653,528 acres of which 2,920,311 acres constitute the gross cropped area. Forests absorb 173,994 acres while other uncultivable land is 196,597 acres. Current fallows constitute 337,663 acres while culturable waste or land which is theoretically available for cultivation measures 38,226 acres.

The following table gives details of the classification by crops of the total cultivated area :—

	Area in acres. (1937-38.)
Rice	5,262
Wheat	226,371
Barley	3,564
Jowari	1,479,374
Bajri	314,584
Maize	1,843
Gram	33,871
Other food grains including pulses	125,031
Linseed	36,829
Sesame (*Til*)	9,138
Groundnut	89,377
Castor seed	1,680
Other oil-seeds	93,808
Condiments and spices	4,625
Sugarcane	544
Cotton	472,699
Other fibres	4,804
Tobacco	1,123
Fodder	8,896
Fruits and vegetables	6,725
Other miscellaneous crops	163
Total ..	2,920,311

It will be noticed that cotton is the most important commercial crop of the district, the other important crops being groundnuts and linseed. Among food crops, *jowari*, *bajri* and wheat are the more important.

Fruits and vegetables accounted for 6,725 acres in 1937–38. More details were obtained from the Department of Agriculture regarding these important crops, which supplied the following information in respect of 1938–39 :—

	Area in acres. 1938–39.
Vegetables—	
Sweet potatoes	1,284
Carrot	296
Radish	46
Others	1,533
..	3,159
Green vegetables—	
Fenu-greek (*methi*)	39
Edible hibiscus (*bhendi*)	160
Others	1,739
	1,938
Fruits—	
Plantain	860
Mango	210
Lime	75
Sweet lime	10
Pomegranate	50
Guava	147
Custard apple	65
Fig	1
Papaya	2
Grapes	5
Others	116
	1,541
Total, Fruits and Vegetables ..	6,638

There were only 8,896 acres under fodder in 1937-38. Normally there is just enough of fodder and grazing. The climate is favourable for rearing animals but imported cattle are preferred to local breeds. The finest cattle bred locally are found in villages bordering the Krishna river. The best imported cattle come from Bangalore, Bellari and Chitaldurga and other places in Madras. Of buffaloes there are two

kinds : *gaularu* or *gaulis* and the ordinary *mhais*. The former comes from Nagpur and gives better milk than the local buffaloes. Sheep are of three varieties : *muralgini*, *patalgini* and *batgini*, the best variety being found in Bijapur taluka. There are two kinds of goats, the *kengori* which comes from Madras and the *kunyi* or Gujarat goat which is famous for the quantity and quality of its milk. The details of live-stock in the district according to the Census of cattle taken in 1934–35 are as follows :—

Bulls and Bullocks	(	breeding, working and young stock)	..	213,954
Cows	(	do.)	..	150,424
Buffaloes	(	do.)	..	25,610
Cow-buffaloes	(	do.)	..	115,238
Sheep and goats	..	..	..	380,063
Horses and ponies	..	..	..	7,166
Donkeys ..	..	..	..	4,406

Of these, 153,909 are milch cattle consisting of 86,443 cows and 67,466 cow-buffaloes.

Survey of Resources : Minerals.

9. The Gazetteer points out that the variety of its strata, which gives so much interest to the geology of Bijapur, makes the district rank high in mineral wealth. Gold is said to have been found in the bed of the Malprabha, while near Kajadoni, four miles south-west of Kaladgi, traces of copper are said to be found. The district is rich in iron ore in the sense that it is found in various parts of the district south of the Krishna. In fact, the smelting of iron ore and the making of agricultural implements from the same were followed as subsidiary occupations by some of the rural artisans.

The district is also particularly rich in building stones of various types and colours. At Bilgi, 12 miles north of Bagalkot, a beautiful rose-coloured granite is quarried, equal in appearance to the best Aberdeen or Mount Sorrel granite. The dioritic green stone, which is said to retain its polish for centuries, is also found in the district. Regarding these different stones the Gazetteer remarks, " The extremely beautiful granites and kindred rocks of great variety of colour and capable of taking a high polish will find a market when the district is opened by roads and railways ".

Quartzite rocks also occur in the district, and quartzites being generally pinky or salmon-coloured. They are very beautiful but excessively hard and tough. Crystalline sandstones of a quartzite nature, varying in colour from white and yellowish white to red, purple, black, drab and dark gray, are also found in the Muddebihal, Badami and Hungund talukas. Guledgud slabs have a great local name and fetch good prices.

Limestones are found in abundance in the Bagalkot, Badami and Muddebihal talukas. The Gazetteer reports that near Kaladgi and Bagalkot the rocks are massive and of different shades. They take a high polish and chemical analysis has shown them to be true marbles. Though they are useful for building and would certainly rank high as decorative stones, neither in ancient nor in modern times have they been used either in plain or in ornamental work.

Clay-slate rock is also found in the Bagalkot taluka. The top layers of this rock can be used for roofing and paving and for writing slates and pencils. The district is, however, reported to be poor in clay deposits suitable for bricks, tiles and pots. One of the curious features of the district is the river Don and some of its tributaries which have saline water from which salt and saltpetre were formerly made by evaporation. The Gazetteer mentions that saltpetre was being made at Gogihal, Kannoli, Kantoji, and many other places by a class called Uppars. That trade seems to have disappeared to-day.

Survey of Resources: Forests.

10. The area under forests is 173,994 acres. The forest is scrub and unimportant and yields only firewood for local use. There are no grazing acres as the soil being rocky, grass cannot grow. In fact the district has been amalgamated with the Dharwar district for purposes of forest administration.

Survey of Resources: Power.

11. There are three electric supply companies in the district. The figures of their output are given below:—

—	Units generated.	Total Units sold.	Units sold for power purposes.
	(000s)	(000s)	(000s)
The Bijapur Electric Supply Company ..	134	102	10
The Ilkal Electric Supply Company ..	28	21	*Nil.*
The Bagalkot Electric Supply Company ..	107	92	7

Survey of Resources: Capital.

12. There were 174 agricultural co-operative credit societies in the district in 1937–38 with a total working capital of Rs. 12·93 lakhs. The non-agricultural co-operative societies numbered 33 during the same year and their working capital amounted to Rs. 12·62 lakhs. The working capital of the District Central Co-operative Bank was 21·92 lakhs during the same year. In addition, there were 27 post office

savings banks with 4,745 accounts current at the end of 1937-38, the balance at their credit being Rs. 8·9 lakhs. During the same year, cash certificates amounting to Rs. 2·2 lakhs were sold. Besides these, the United Bank of Karnatak and the Corporation Bank had their offices at Bagalkot and Bijapur respectively.

Industries in the District: General.

13. The population engaged in industrial occupations has been estimated at 41,905 including the 6,903 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities:—

Sawyers	128
Butchers	151
Tailors, milliners, etc.	1,551
Washing and cleaning	725
Barbers, hair-dressers	1,493
Scavengers	121
Total ..	4,169

The remaining 37,736 may be regarded as persons engaged in industry. The Census tables give the following details about these:—

Forest industries	246
Stock-raising	6,501
Fishing	156
Cotton spinning, sizing and weaving	15,156
Rope, etc., making	312
Wool carding, spinning and weaving	828
Silk spinning and weaving	381
Dyeing, bleaching, printing, etc.	259
Working in leather	1,205
Carpenters, turners, etc.	2,518
Basket making, etc.	775
Blacksmiths, etc.	807
Workers in brass, copper and bell-metal	113
Potters	1,096
Manufacture and refining of vegetable oils ..	311
Rice pounders, huskers, etc.	113
Boot, shoe, sandal and clog-makers	1,564
Lime burners, cement workers, etc.	3,269
Jewellers and ornament makers	1,553
Other miscellaneous industries	573
Total ..	37,736

Of these, 2,233 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	No. of factories.		No. of workers.	
	1931.	1938.	1931.	1938.
Chemicals, dyes, etc. (oil mill) ..	1	1	35	72
Paper and printing	..	3	..	25
Seasonal factories (cotton gins and presses)	47	47	2,198	1,625
Total ..	48	51	2,233	1,722

14. The investigator, Mr. S. M. Muzumdar, spent about 15 days in the district and interviewed a number of artisans and traders in the district. The following notes on some of the existing industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. This is the most important industry of the district; and of all the Karnatak districts, it is most extensively carried on here. The different centres visited by the investigator were : (1) Guledgud, (2) Ilkal, (3) Kamatgi, (4) Bagalkot and (5) Bijapur town. Of these Guledgud and Ilkal are the more important centres and are reported to have at least 5,000 looms each. The numbers of looms at the other centres are estimated to be 2,000 at Kamatgi, about 400 at Bagalkot and about 50 in the town of Bijapur. It may be added that the Collector of the district estimates the total number of looms in his district at about 13,000.

At Guledgud handloom weaving seems to be the main industry of the people. The investigator reports that of the 5,000 looms in that centre, about 1,000 are throw-shuttle looms and the rest are of the fly-shuttle variety. In any case there seems to be no doubt that the proportion of fly-shuttle looms has considerably increased in recent years. The total number of looms has also increased. The yarn commonly used is said to be of 40s and 50s. China silk is used mostly for borders. The type of the cloth woven is commonly *khans* or bodice cloth.

16. There are four types of persons running this industry : (1) the employer or the *karkhandar*, (2) *marwari* dealers, (3) independent artisans and (4) piece-workers. According to the investigator there

must be about 50 *karkhandars* owning more than 10 looms each. These *karkhandars* engage the piece-workers for weaving cloth and others for dyeing and miscellaneous work. The yarn used is usually Indian, mostly from the Kohinoor and Gokak Mills, though foreign yarn is also used in the shape of mercerised yarn. Ready made warps of Chinese silk are also extensively used. Some of the *karkhandars* supplement their stocks by buying *khans* from the independent artisans. These *khans* are marketed direct to the merchants at places like Nasik, Poona, Jalgaon and Bhusawal. The *karkhandars* do not wish to change the patterns or designs of their products as the Guledgud *khans* are said to be well-known and have a good market. At the same time they seem to be afraid to increase their production as they are not sure of finding a ready market for additional output. They, however, feel the competition from mill produced blouse cloth which is being increasingly used as a substitute for their *khans*. They also feel the competition from the Ichalkaranji power looms which have now started producing *khans*. It is also stated that some other centres have also started producing *khans* similar to their type. All these factors are said to have been responsible for lowering the prices of their products. As an instance of the depressed condition of the industry, it is stated that now-a-days no employer is prepared to advance money to the out-workers employed by him, whereas some 15 years back it was a usual thing for the employers to advance large sums of money to their workers and thus bind them to their service.

17. Among other grievances the chief one is regarding the capture of business by the *marwari* dealers who had come there quite recently and have now obtained control of practically half the trade. The other is that prices have fallen so low that it is no more an economic proposition to continue in the business. As an instance it is stated that the *khans* which used to fetch about 12 to 13 annas some years ago sell at present for 5 to 6 annas. It is admitted that this decline in sale price is also due partly to decrease in the prices of raw materials. The third complaint is about the *octroi* duty levied by the Municipality both on imports of yarn and on the exports of finished products. It is further suggested that Government should themselves supply the yarn at cheaper rates.

18. The dealers get their raw materials directly from Bombay. The yarn used is usually of 30s, 32s and 40s, mercerised yarn and China silk. The dealers give to each of the outworkers raw materials sufficient to produce 80 *khans* at a time and pay them wages on the basis of piece-work. The wages include weaving as well as preparatory charges. In one instance the wage paid was Rs. 8 for 80 *khans*. The *khans* are sold to merchants at Sholapur, Pandharpur, Belgaum, Bijapur and Bellary. Their complaints are in the main similar to those of the *karkhandars*. They further suggest that a mill for supplying yarn to them should be started at Bagalkot. It has been also suggested that Government should open a godown wherein the dealers could keep their stock and obtain advances on the same. It is reported that most of these *marwari* dealers are making good profits from their business.

19. The independent artisans are estimated at about 1,000 in number. Their economic condition is reported to be bad and most of them are in debt. The two independent artisans interviewed by the investigator, have each two looms. Each of them is assisted by a relative. They get their raw materials from the local merchants. The yarn and silk are purchased undyed and the outworkers are paid for the dyeing of the yarn while the preparatory work is done by the artisan and his family members. The average output per loom per day is about 4 *khans*. Both the artisans stated that they are not free to sell their products to whomsoever they like. They obtain their raw materials on credit on condition of bringing to the dealers their finished goods for sale. They admit that the merchants from outside purchase their products at higher prices but state that they have no capital to prepare goods for stock and sell them to these merchants who come once or twice a year. They have to dispose of their produce daily to maintain themselves. They suggest that Government should open a central store for supplying them with their raw materials either at cheaper rates or in return for finished goods by paying a reasonable price. Some of them want training in the fly-shuttle loom, but want Government to supply them with the fly-shuttle looms and pay them a subsistence allowance during the period of training.

20. The piece-workers are estimated to number about 3,500. They are stated to be very poor and completely under the control of the *marwari* dealers and the *karkhandars*. Their wages are being cut down and due to lack of staying power they have no alternative but to work for whatever they get. It has been suggested that as their economic condition is rather miserable, Government should lay down some minimum wage regulations for them. At Guledgud as also in other weaving centres in the Bijapur district, there is reported to be an increase in the number of looms. It is stated that the output is not diminishing, though the prices are falling.

21. At Ilkal there are about 5,000 persons engaged in this industry. Of these, it is estimated that there are about 100 *karkhandars* owning more than 10 looms, and about 1,000 to 1,500 independent artisans, while the rest are all piece-workers. Mainly *sarees* are woven and the yarn used is mostly of 60s, the other raw materials being Japan and China silk. The *karkhandars* state that the demand is slack in the rainy season during which period they produce for stock. Their output is sold to merchants at Khandesh, Nasik, Belgaum and Mysore, while the independent artisans sell their products to the local dealers. Here also a great deal of control is exercised by the *marwari* dealers who give out raw materials and collect the finished products. A piece-worker and his wife together, earn about Rs. 2-8-0 per week. Most of these workers use throw-shuttle looms. The complaints put forward by the Ilkal weavers are practically the same as in Guledgud excepting that much more stress is laid here upon the overcrowding in the industry. The weavers report that all sorts of people including *mahars, dheds*, etc., are now taking to handloom weaving and thus bringing down wages in that trade.

22. The Kamatgi weaving centre is only about five miles away from Guledgud and consequently the Guledgud *marwaris* have established their control over this centre as well. The number of looms here is estimated at 2,000, and almost all of them are stated to be working on the fly-shuttles. Most of the weavers at this centre are reported to be piece-workers who are completely under the control of the *marwari* dealers. Another feature of the industry special to this centre is the existence of a class of middlemen from among the weavers themselves. The Guledgud *marwaris* are reported to be visiting this centre on Sundays and arranging with some well-to-do weavers for the supply of particular type of produce at an agreed rate of wage. The weavers in question are then provided with the necessary raw materials. These weavers in turn are stated to be getting the work done for them at a lower rate of wages by piece-workers and thus profit by the difference in the two rates. The *khans* are being sold in the markets of Berar, Ahmednagar, Satara, Ratnagiri, Sholapur and Belgaum.

23. A few weavers produce turbans. The weavers are reported to be earning 8 annas on each turban. The average output of turbans per weaver is reported to be three per week. The turbans are sold at Pandharpur, Poona, Khandesh, Broach and in the Karnatak districts, and these people do not appear to be suffering much from competition. The grievances of weavers at Kamatgi are identical with those at Guledgud. Here again much emphasis is laid on the increase in looms and the corresponding overcrowding in the occupation. Everywhere the weavers demanded assistance of some kind or other from Government.

Wool-weaving Industry.

24. Bijapur is an important wool centre. In fact, the number of sheep and goats in this district is much larger than in many of the districts of the Province. The investigator visited two wool weaving centres or shepherds' colonies : one at Darga (about 2 miles from Bijapur), and the other at Buddehal. At Darga it is estimated that there are about 22 looms. Sometime ago the Department of Industries opened a school in Darga and introduced a new type of loom which is capable of producing a larger output than the old type of loom. Some of the weavers have taken to the new looms, while some others are still sticking to the old type. The weaver interviewed by the investigator, has the new type of loom. He prepares *kamblis* in the two wool shearing seasons and at other times produces cotton *chaddars*. On this loom he can weave a *kambli* in one day, whereas the old type of loom requires two days. This weaver has also been trained by the Department of Industries to weave a rug. But he does not get sufficient quantity of wool as most of the local wool is exported outside by big merchants and the weavers get very inferior wool. Consequently, the rugs prepared by him are comparatively rough. Moreover, he cannot

sell them sufficiently cheap and compete with the rugs manufactured by mills. He, therefore, now mostly prepares *kamblis* during the wool-shearing seasons, when he gets some supply of wool. As regards *chaddars*, he states that he can prepare 8 *chaddars* in about 8–10 days but as there is not enough demand he prepares only 15 *chaddars* a month. The yarn used for these *chaddars* is 2/6s for warp and 6s for weft. The yarn is supplied by Sholapur mills and is purchased locally.

25. The wool-shearing seasons are two during the year, one during the months of November and December and the other during the months of June and July. During these two seasons the villagers from the neighbouring areas bring their wool for sale and the local merchants stock them. The weavers get their supply from these merchants. The wool is spun into yarn by the women. The wages for spinning are about a rupee for each *kambli*. Ordinary *kamblis* fetch about Rs. 3–2–0 each while the superior ones are sold for Rs. 3–12–0 each. The monthly earnings of the weavers come on an average to Rs. 8 to Rs. 10. During the rainy season no work is undertaken. The *kamblis* are purchased by the local and outside merchants who visit the place every week.

26. The main complaint of the weavers is about the supply of wool. It is stated that all the wool available in the district is purchased by the agents of Bangalore, Thana and Bombay mills with the result that they have to pay higher price for their wool and even then do not get the best quality. This, it is stated, has made the weavers reluctant to take to the new type of looms. The weavers, therefore, request Government to intervene to prevent the sale of wool to outsiders till their own needs are satisfied. The second complaint of these weavers is about the competition of mill rugs which are now being preferred by the educated classes. They also point out that Government is providing every year their servants with woollen clothing and blankets and that it should be easy for Government to render concrete help to their industry by patronising the products of handlooms. Thirdly, they complain of a general deterioration in the agricultural conditions and as their main market is provided by the ryot, their prosperity fluctuates with that of the cultivator. Finally, it is suggested that Government should supply them with soft wool which they can mix with the rough wool locally available, and produce better *kamblis*. They also desire Government help in securing the capital necessary for purchasing raw materials and for marketing their products.

The conditions and complaints of the weavers of Buddehal are more or less similar to those of the weavers of Darga. Here about 50 families of weavers are reported to be engaged in this industry and that some of them rear sheep and use the wool for the production of *kamblis*. All their looms are reported to be of the old type.

Brass and Copperware Industry.

27. The investigator reports that from the point of view of the turnover this is the biggest industry in the town of Bijapur, which is

a distributing centre for the whole of the district. There are reported to be about 15 big shops of well-to-do people who are dealing in this industry. The raw materials are imported from Bombay and the merchants complain that they have to pay heavy transport charges and *octroi* duties. The demand for their wares is brisk during the marriage and harvest seasons. The work is done by piece-workers for about 8 to 9 months in a year and these are paid on piece-work basis, the rates being Rs. 1–12–0 per maund of copper sheets and Rs. 1–14–0 per maund of brass sheets. Of the two manufacturers interviewed, one engages about 50 workers and his total monthly sales in the brisk season are stated to be worth about Rs. 15,000. The other engages about 22 workers and his sales are worth about Rs. 5,000 per month in the brisk season. The products are sold in the markets of Bagalkot, Guledgud, Talikot, etc., and are also taken to the big fairs at Hampi, Gokak, etc., for sale. The industry suffers from the competition of the machine-made products particularly in brassware. Due to scarcity and famine people in the district have become poor and this is stated to be the main reason why they prefer cheap machine-made products. The manufacturers want that an industrial bank should be started to finance them capital at cheap rates of interest as at present they are required to pay high interest to the dealers in copper and brass sheets. Regarding the future of their industry, the merchants do not seem to be optimistic and state that unless the condition of the agriculturists, who are the mainstay of their industry, is improved, the industry cannot hope to thrive.

Ginning and Pressing of Cotton.

28. The investigator interviewed one of the owners of cotton gins and presses in the town of Bijapur. This gentleman employs 200 persons during the ginning season, viz.: the three months of January, February and March. In the rainy season, business is completely slack and at other times it is moderate. The owner interviewed has eight gins and one hydraulic press. The total equipment is stated to have cost him nearly Rs. 50,000. He gins and presses about 3,000 bales of cotton in a year. The main complaint is about the impurity of the raw cotton and about the practice of deliberately mixing up dust and leaves with the raw cotton so as to increase its weight. Another complaint is about the cotton seeds. These are now sold at very cheap rates. Formerly the owner himself is stated to have been manufacturing oil from them but as people have no liking for it, though its nutritive value is great, he has stopped this business. He points out that in America the cotton seed oil is used for edible purposes and its cake for manure; and that here people are not prepared to make use of either. He wants Government to undertake intensive propaganda in the matter as an active industry of cotton-seed oil will materially help the ginning and pressing industry.

Oil Mills.

29. There is only one oil mill in the district. In addition to oil crushing, paints and varnishes, etc., are also manufactured at the mill. The raw materials used are groundnuts, linseed, *kardi*, sesame (*til*) and castor seeds. These are obtained through agents who collect the materials from agriculturists. It is stated that the raw materials are not available in sufficient quantities in the district, which suffers from scarcity and famine every 3rd or 4th year and that it does not pay to bring the raw materials from outside. Secondly, the mill people complain against the practice of mixing of the seeds with dirt and stone to increase the weight and also of supplying unripe seeds with the same motive.

About 120 men are employed in the mill. About 70 of these are engaged throughout the year and the extra 50 are employed only during the brisk season lasting from March to May. The labourers are paid at the average rate of 6 annas for men and 3 to 4 annas for women. The manufacture of paints and varnishes is undertaken in the slack season. The products are sold both in India and outside through agents. The mill has to face competition in paints and varnishes from foreign products, and it is stated that the public have a prejudice against Indian-made articles and consider foreign products to be superior. The owners suggest that Government should give them expert technical advice in the manufacture of paints and varnishes of a superior quality. Secondly, it is suggested that there should be an embargo on foreign products. It is also added that Government should assist them by purchasing their paints and varnishes. Regarding the oil-pressing industry they want technical advice in the matter of classifying the fertilising qualities of the different seed cakes. The owners also want financial help from Government.

Oil-seeds Pressing by *Ghani*.

30. There are reported to be many *ghanis* in the district. In Bijapur town itself the number is estimated to be over 50. These *ghanis* are used for extracting *kusbi* oil, about half of which is consumed in the town and the rest marketed in the neighbouring towns. Although the competition of the oil mills is stated to have affected the income of the *ghani* workers, they are reported to be still getting a living in this district from *kusbi* oil, in which there is as yet no direct competition from mills, as the latter press only groundnut oil. One of the owners interviewed by the investigator has 10 *ghanis* and engages 12 men and 4 women to work them. He gets his supply of seed from the local agents and agriculturists. The preparatory processes of breaking and winnowing the seeds are done by women who are paid only about 1½ annas a day. The *ghani* workers are, however, given about 4 annas per day. It has been suggested that Government should introduce a better type of *ghanis* which would press more oil without putting undue strain on the bullock. The

oil is sold in the markets of the district and also outside, particularly in the Dharwar district. Generally the industry of oil-pressing by *ghanis* is reported to be decaying owing partly to the competition of oil-mills and partly to famine conditions in the district.

Agarbatti Industry.

31. It is reported that this industry is carried on by about 8 families in the town of Bijapur. The quality of *agarbattis* produced varies from family to family. The work is done mostly by women who are skilled in the trade. Of the two persons interviewed, one employs six women and the other five. These women are given wages on a piece-work basis and are paid on an average at the rate of Rs. 1–8–0 for every 4 seers of *agarbattis*. It is estimated that a woman working for 9 hours can earn about 6 annas a day. The raw materials are obtained from Bombay. Of the raw materials the most difficult to obtain is said to be the sandal-wood powder. The artisans want Government to arrange for the supply of sandalwood powder to them.

32. The prices of the *agarbattis* depend upon their quality and vary from Rs. 2 to Rs. 6 per seer. The busy months are from February to June. Most of these *agarbatti* producers have their shops of perfumery articles and do not move out to canvass orders.

Shoe-making Industry.

33. The investigator reports that there are about 100 shops in the town of Bijapur which prepare and sell shoes, *champals*, and *jodas*. They get their supply of leather locally and in some cases directly from Bombay. Chrome leather required for the uppers is imported from Bombay. It is stated that the local dealers pay advances to the *dhors* and compel them to sell the finished leather to them only. The shoe-manufacturers have therefore either to pay higher prices or go outside their town for their supply of leather.

34. It takes about five hours to prepare one pair of shoes. Except the closing of the uppers of the shoe, all other processes are carried out by hand. The business is slack in the rainy season. During the brisk season the prices vary from 10 annas to Re. 1 per pair of *champals* and Rs. 3 to Rs. 7 per pair of shoes. The artisans are reported to get a bare living. The competition between the local artisans themselves is very keen and the artisans admit that there is no room for so many of them to carry on their trade and earn a living in a small town like Bijapur. Moreover, they suffer from the competition from canvas and rubber shoes. The artisans point out that the majority of the local population are too poor to buy their shoes or *champals* while the rich people prefer factory-made articles. They have therefore to prepare their goods for orders only. Among the suggestions made for the improvement of their industry are: (1) improvement of the economic condition of the people in the district which is often affected by scarcity, (2) training of

the local *dhors* (tanners) in better methods of tanning and (3) financing of the artisans for purposes of purchasing raw materials. The shoe-makers have also a grievance against the Municipality which is said to charge them heavy rent for their shops. These shops are housed in corrugated iron sheds and the artisans suggested that the rents for these should be much reduced. A suggestion has also been made that if some of the *chamars* are induced to open their shops at other places in the district and relieve overcrowding, the general economic condition of these artisans would materially improve.

Manufacture of Lime.

35. At Bagalkot, this industry is reported to be next in importance only to handloom weaving. It is estimated that there are about 60 lime-kilns in that town. The industry is stated to be carried on by the poor people who get from it about Rs. 5 to Rs. 6 per month. Due to the increasing poverty of the masses, house-building activity is low at present and there is not much demand for lime. They obtain the lime-stones from a local quarry. It is stated that about 24 buckets of lime can be produced in a month. The selling price is between 4 to 6 annas per bucket. The produce is sold locally only. In the rainy season business is slack. It is reported that the output can be increased but that the artisans are afraid to produce more for fear of not finding any market for the extra produce. They suggest that Government should supply them with cheap coal, and with finance at cheap rate of interest and also purchase the lime prepared by them for use on Government buildings.

Rope-making.

36. At Bagalkot there are reported to be about 12 families who are engaged in this industry. Their economic condition is stated to be very bad. They hardly earn about Rs. 5 per month regularly. Most of them take up agricultural work as rope-making is only a seasonal industry and does not yield enough income. The ropes are prepared from hemp which is available only after the rainy season and purchased from the villagers of Ramdurg and Yerabatti. It is stated that a family of five people can prepare 150 ropes in 8 days from 3 maunds of hemp. The different processes of cleaning and separating the fibres and preparing the rope are all done by hand. The ropes fetch about one anna each. But usually the income does not exceed Rs. 5 to Rs. 6 per mensem per family. The ropes made are sold locally. This industry in which formerly Bagalkot is stated to have been specialising is now being carried on by most of the surrounding villages and the industry at Bagalkot is said to have suffered. The artisans now take to agricultural work to support themselves. For improving their industry the artisans suggest that Government should give them finance for purchasing raw materials and that there should be some marketing arrangement for selling their products.

Other Industries.

37. Bagalkot was once known for its hand-made paper industry. At present there is reported to be only one family here which carries on this industry and earns about Rs. 8 a month. The demand for this paper mainly comes from the *marwari* and other merchants. Similarly Gudur in Hungund taluka, Yadhalli in Bilgi *petha* and Jalihal in Badami taluka, are known for their glass-bangle industry. These bangles are of a very rough type, and are prepared by very crude methods. At Bagalkot, slates and slate pencils are also prepared on a small scale, while at Talikot coarse carpets (*jajams*) are prepared.

Possibilities of New Industries.

38. The main resources that can be utilised for starting new industries in the district are its minerals. The district has an abundant supply of different kinds of stones. Slate-stone is found in Bagalkot taluka and it can be utilised for developing a slate and slate-pencil industry in the district. Similarly the lime-stones found at several places in the district can be also utilised for industrial purposes. It is reported that grinding-stones are available in the district and that there were many artisans who made a living by cutting these stones suitably for purposes of grinding cutlery or grinding herbs, sandalwood, etc. It should be possible to utilise the stone for developing an industry of manufacturing grinding-stones for various purposes. Similarly the soft-stone from which cooking utensils are made at present on a very small scale can be used for preparing articles of varous designs and artistic value. Further the Gazetteer mentions that a class of artisans known as *uppars* used to prepare saltpetre from the saline water of the river Don. It should be possible to revive this industry. It should also be possible to develop the paper-making industry at Bagalkot and the bangle-making industry at Gudur, Yadhalli and Jalihal if proper training and financial assistance are given to the artisans.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

BOMBAY CITY

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the

limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in the small scale and cottage-industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BOMBAY CITY

Position and Area.

Bombay City is the capital of the Province of Bombay. It is the principal seaport of Western India and is situated on an island in 18° 55′ N. and 72° 54′ E. Bombay island is one of a group lying off the coast of the Konkan, but by the construction of causeways and breakwaters, it is now permanently united on the north end with the larger island of Salsette, and so continuously with the mainland. The remainder of the group of islands constitutes a part of the Kolaba district. Bombay City has an area of 24 square miles and is regarded as constituting a district by itself for certain administrative purposes.

Physical Features.

2. The island consists of a low-lying plain about 11½ miles long by 3 to 4 miles broad, flanked by two parallel ridges of low hills. Colaba point, the headland formed by the longer of these ridges, protects the harbour lying on its eastern side from the force of the open sea ; the other ridge terminates in Malabar Hill. The island is in shape of a trapezoid. On a slightly raised strip of land between the head of the Back Bay and the harbour is situated the Fort, now occupied by public buildings and commercial offices. From this point the land slopes westward to the central plain, which before the construction of the Hornby Vellard, was liable to be submerged at high tide.

Climate and Rainfall.

3. Bombay never attains great extremes of heat or cold, such as are encountered in the interior ; but the climate, though temperate, is oppressive, owing to the extreme saturation of the air with moisture during the greater part of the year. The cold season lasts from December till March. In June the south-west monsoon breaks, and heavy rain continues with great regularity till the end of September. The hottest months are May and October. The average rainfall is about 75 inches.

Population.

4. The Bombay City according to the 1931 Census, has a population of 1,161,383 persons, of whom 747,381 are males and 414,002 are females. The total number of principal workers is 559,926 of whom

507,599 are males. The occupational distribution of the principal workers is as follows:—

Exploitation of animals and vegetation ..	10,690
Exploitation of minerals	1,077
Industry	176,312
Transport	50,728
Trade	84,974
Public force and administration	41,326
Professions and liberal arts	19,976
Persons living on their income	1,854
Domestic service	40,259
Insufficiently described	125,995
Unproductive	6,735
Total ..	559,926

The proportion of the industrially occupied persons to the total earners is about 31·4 per cent. But in addition to the 176,312 persons shown as industrially occupied according to the Census classifications there are 3,223 persons engaged in stock-raising, 2,453 persons engaged in fishing and 666 persons engaged in salt-making. These persons have been included under "exploitation of animals and vegetation" and "exploitation of minerals" for Census classifications but they are more or less engaged in industrial occupations. With the addition of these persons, the total principal workers engaged in all kinds of industrial occupations number 182,654.

Health and Medical Facilities.

5. Health conditions in the city cannot be described as satisfactory. The mean ratio of births per thousand during the five years preceding 1937 was 27·97 per thousand while that for deaths was 23·38. The corresponding figures for the Province as a whole were 40·11 and 27·25 respectively. The survival rate for the City is the lowest in the Province, being only 4·59 per thousand as against the provincial average of 12·86. It is pertinent here to notice the state of overcrowding in Bombay. Thus the Census Superintendent for Bombay City remarks, "One-roomed tenements form 81 per cent. of the total tenements in the City and they are occupied by 791,762 persons or 74 per cent. of the population of the City".

As regards medical facilities, there are a number of hospitals and dispensaries in Bombay City and other medical institutions like maternity hospitals, tuberculosis sanatoria, leper homes, etc., are also many.

Literacy and Educational Facilities.

6. According to the 1931 Census, 280,925 persons are returned as literate. This constituted a literacy percentage of nearly 24. The percentage of literacy in English in 1931 was 11·6. In 1921 the corresponding figures were 23 and 8. It is not surprising that the proportion of literacy in Bombay City is higher than in the rest of the Province.

The educational facilities available in the City are summed up in the following statement for the year 1937-38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	523	108,771
Secondary (including lower secondary and English teaching) schools	110	39,242
Art, commercial and industrial schools	49	4,999

Transport Facilities.

7. The City is very well served with all the modern means of transport. The great railways, the Bombay Baroda and Central India Railway and the Great Indian Peninsula Railway, run right through the heart of the City. Within the City all the wards have been connected by an efficient tram system. Passenger traffic has been further facilitated by the plying of the numerous buses maintained by the Bombay Electric Supply and Tramways Company. The total length of roads maintained by the Municipality—and all the roads within the City are under the charge of the Municipality—is 224 miles.

Trade.

8. In addition to being an industrial city Bombay is also a great trading centre. In the year 1938-39, Bombay's share in the All-India trade was 30 per cent. and amounted to Rs. 107 crores being made up of Rs. 33 crores of exports and Rs. 74 crores of imports. A good deal of the prosperity of Bombay is based on and depends upon its foreign trade.

Survey of Resources : Agriculture and Pasture.

9. The City has an area of 24 square miles. The whole of this is covered by factories, public offices and residential buildings and there is no room for agriculture.

According to the Census of cattle taken in 1934-35 the details of live-stock in Bombay City are as follows :—

Bulls and Bullocks	(working, breeding and young stock)		8,263
Cows	(do.)	..	3,233
Buffaloes	(do.)	..	1,182
Cow-buffaloes	(do.)	..	25,354
Sheep and goats	(do.)	..	19,868
Horses and Ponies	(do.)	..	4,527

Of these milch cattle is 24,891 consisting of 22,740 cow-buffaloes and 2,151 cows.

Survey of Resources : Power.

10. The City obtains its electricity from the Bombay Electric Supply and Tramways Company, the Tata Hydro-Electric Power Supply Company, the Andhra Valley Hydro-Electric Company, and the Nila-Mula Hydro-Electric Supply Company. The relevant statistic concerning these companies are given below :—

——	Units generated (in million units).	Total units sold (in million units).	Units sold for power purposes (in million units).
Tata Hydro-Electric Power Supply Company.. ..	586	503	284 for industries. 106 for railways.
Andhra Valley Power Supply Company			
Tata Power Company ..			
The Bombay Electric Supply and Tramways Company ..	94 (purchased from Tata's)	83	50 (11 for tramways and 39 for power purposes).

Survey of Resources : Capital.

11. Bombay City is fairly well supplied with capital. All the exchange banks working in the country have branches in Bombay and the two biggest of the Indian joint-stock banks, namely, the Central Bank of India and the Bank of India have their head offices and a number of branches in the City. It is not possible to get statistics

separately for the city of the deposits in the exchange banks and Indian joint-stocks banks, but there is no doubt that of the Rs. 294 crores which were returned as deposits during 1937, in the joint-stock banks, the exchange banks, the Imperial Bank of India, and the Reserve Bank of India an appreciable portion was derived from the City. In addition, there is in the city the Bombay Provincial Co-operative Bank which so to speak forms the financial apex of the co-operative structure of the Province and the working capital of this institution during 1937-38 was Rs. 2·38 crores. There were 206 non-agricultural co-operative societies in the City in 1937-38 and their working capital amounted to more than Rs. 3 crores. In addition, there were 82 post office savings banks during the same year, with 1,32,325 accounts current and having a balance of Rs. 2·6 crores. Postal cash certificates amounting to more than a crore of rupees were also sold during the same year.

INDUSTRIES IN THE CITY—GENERAL.

12. The population engaged in industrial occupations has been estimated at 182,654 including the 6,342 persons engaged in stock-raising, fishing and salt-making. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities:—

Sawyers	72
Butchers	967
Tailors, milliners, etc.	11,661
Washing and cleaning	5,588
Barbers, hair-dressers, etc.	3,068
Scavenging	5,996
Total ..	27,352

The remaining 155,302 may be regarded as persons engaged in industry. The Census tables give the following classified statistics:—

Stock-raising	3,223
Fishing	2,453
Salt-making	666
Cotton ginning, cleaning, etc.	1,875
Cotton spinning, sizing and weaving ..	113,084

Dyeing, bleaching, etc.	934
Lace, crepe, embroideries, etc.	445
Working in leather	772
Furriers, brush-makers, etc.	517
Carpenters, turners, etc.	5,863
Basket makers, etc.	483
Blacksmiths, workers in iron, etc.	1,409
Workers in brass, copper, bell-metal.. ..	282
Potters, makers of earthenware	486
Brick and tile-makers	116
Grain parchers	286
Sweetmeat and condiment makers	533
Manufacturers of tobacco	323
Boot, shoe and sandal makers	3,671
Cabinet makers, etc.	1,038
Upholsterers, tent makers, etc.	141
Lime burners, cement workers, etc. ..	3,371
Assembling, repairing, etc., of motor vehicles or cycles	583
Ship, boat, etc., builders	162
Heat, light, electricity, gas works, etc. ..	1,205
Printers, engravers, book-binders, etc. ..	2,171
Makers of musical instruments	614
Makers of clocks, surgical instruments, etc. ..	300
Makers of jewellery and ornaments ..	2,316
Other miscellaneous industries	5,980
Total ..	155,302

From the above figures it is clear that the textile industries dominate the picture. In fact, nearly 79 per cent. of the industrial workers of the City are dependent upon this industry.

The Census figures of occupational distribution can be supplemented by factory statistics. The number of factories and the people employed

therein for the Census year 1931 as also for the latest year (1938) are given below :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund ..	21	22	12,119	11,987
Textiles—				
Cotton spinning	77	75	124,963	163,945
Hosiery	3	3	163	65
Silk mills	2	3	1,180	204
Woollen mills	1	3	540	922
Miscellaneous	2	48	114	5,788
Total—Textiles ..	85	132	126,960	170,924
Engineering	88	235	13,099	19,920
Minerals and metals ..	8	20	371	996
Food, drink and tobacco ..	33	73	1,759	2,668
Chemicals, dyes, etc. ..	47	62	5,925	9,121
Paper and printing ..	55	178	4,713	7,650
Processes, *re* : wood, stone and glass	18	41	1,019	3,778
Processes connected with skins and hides	1	13	172	921
Miscellaneous	25	48	887	2,548
Total ..	381	824	167,024	230,513

(*Note.*—There has been a general increase in the number of factories in 1938 but it is also partly due to the extension of the Factory Act to smaller concerns.)

It will be seen that there is a large discrepancy in the Census figures of industrial workers and the figures of factory workers according to the Factory Report for 1931. The latter figures are more reliable and have to be accepted. It is evident, therefore, that the total number of industrial workers in the City must largely exceed the figure of 167,024 representing only the factory workers.

13. Though the industrial structure of the city is predominantly of a large scale kind, there is a large number of small scale concerns using power. This can be seen from the fact that while the Bombay Electric Supply and Tramways Company is at present supplying power for industrial purposes to as many as 2,453 concerns, the registered factories run on electric power are only about 469. There would thus seem to be nearly 2,000 small-scale concerns using electricity in the City. In addition to these small-scale concerns, there is a number of small *karkhana* type establishments such as *bidi* works, furniture works, boot and shoe making establishments, etc. Finally, there is in the city a considerable number of what may be called independent artisans such as handloom weavers, tanners, *champal* makers and so on. The City thus presents an industrial picture comprising on the one hand large industrial units in which lakhs of rupees are invested and power is used to run heavy and complicated machinery and plant of large dimension and on the other of small independent artisans who work in their own homes, market their own products and use tools and implements worth less than Rs. 50. There is thus a considerable variety of industrial establishments about which some idea is obtained by the returns collected by the Committee's investigators in respect of the different industries. *It must be added that the organised textile industry as also most of the other large-scale industries were deliberately excluded from the scope of the investigators' survey.* The investigators, Messrs. R. P. Cholia, B. M. Kale and S. M. Muzumdar, together spent about four months and each of them interviewed a number of artisans, *karkhandars*, manufacturers, and traders in the City. The following notes on some of the *cottage and small-scale* industries in the City are based mainly on the returns and other information collected by the investigators during their stay as also on other data available to the Committee.

Handloom Industry.

14. The handloom weavers of Bombay City are mostly concentrated in Madanpura and Byculla. The majority of these are from the United Provinces and their condition is much the same as in the other weaving centres of the Province. Here also, the number of weavers is reported to have undergone a steady decline, it being reported that there were 1,000 handloom weavers several years ago as against only 400 to-day. The displaced workers have either accepted work in mills and similar occupations or have returned to their native places. Most of the weavers are independent workers. Some 4 or 5, however, own more than 5 looms

each. The counts of yarn used in most cases are 20s, 40s and 60s. In some instances artificial yarn of Japanese origin is also used. The main products are ordinary *sarees*, *khans* and carpets and these are sold to local dealers of Chira Bazar and Madhav Baug from day to day. The weavers complain that there is no demand for their products. The result is idleness for a considerable period of time and low prices for their finished products. The independent weavers are reported to hardly get work for about 20 days in a month from October to May and during the rainy season, to pass about 20 days in a month in idleness. As a result of this the income of an independent artisan is stated to be not more than Rs. 15 or Rs. 20 per month. Even a *karkhandar* owning about 12 looms, it is stated, gets not more than Rs. 40 to Rs. 50 per month. Many of the weavers have not visited their native places for years together on account of their extreme poverty. The weavers attribute their present wretched condition to competition from Japanese and Indian mill products. Another factor contributing to the same end is the higher cost of living in Bombay as compared with the mofussil centres. This is said to make them unable to compete with the handloom products of the rest of the Province.

Powerloom Factories.

15. The investigator visited two powerloom factories, one of which is engaged in producing georgette from artificial silk yarn and the other in preparing *sarees*, fancy *patals*, etc.

The factory weaving the georgettes employs about 50 persons and has an equipment worth about Rs. 50,000. All the machines are made in France. Up to 1936 this mill was exclusively using Kashmere raw silk but after that it had to give up using Kashmere silk. This was due to several causes. Firstly, while the price of Kashmere raw silk was comparatively high, that of the finished product was not correspondingly high. Secondly, there were no regular stockists of this raw silk in Bombay and it was difficult to get regular supplies of Kashmere silk. At present this factory imports artificial silk yarn from England, Italy, Belgium and Japan. The finished products are sold throughout India. The company sells the silk waste to exporters who send it abroad to be turned into yarn again. The other factory uses cotton yarn of 30s to 100s and mercerised yarn of 2/64s and 2/84s for warp and weft; and artificial and China silk yarn for borders. It employs about 300 workers.

16. The main difficulty in the way of the silk-weaving industry of the city is reported to be the severe Japanese competition as also the internal competition. It is alleged that Japan is dumping her artificial silk goods in the Indian market with the result that the pure silk weaving industry of the country, has suffered acutely. The factory owners demand protection against this foreign competition and are confident that if this is given they will be in a position to produce pure silk fabrics. They also suggest that efforts should be made by Kashmere, Mysore,

etc., to improve the quality and lower the price of white raw silk. As regards powerloom *saree* weaving industry, it is maintained that factories established in British India are at a disadvantage as compared with those working in the Indian States due to the absence of labour laws and the lower level of wages and taxes. These factory owners, therefore, suggest that the Indian State products should not be allowed to be sold in British India without restraint and that attempts should be made to equalise conditions both in Indian States and British India. The factory owners are also of the opinion that the time has come for the establishment of a machine-making industry in the country. Finally, they stress the desirability of producing artificial silk yarn within the country itself.

Hosiery Works.

17. The investigator interviewed the owners of three hosiery *karkhanas*. All of them employ more than 15 workers. Generally speaking, the equipment in a hosiery *karkhana* is worth about Rs. 30,000 and cotton, silk and woollen yarns are used. Of these only the cotton yarn is Indian and the rest is foreign. On an average a *karkhana* produces goods worth about Rs. 1,500 a month. The products are mostly sweaters, mufflers, socks, hoses, etc., and they are marketed throughout the Province.

18. The hosiery industry has to face both internal and external competition. As a measure of protection against the dumping of cheap imported hosiery, the *karkhandars* suggest that the import duty on these products should be enhanced.

Dyeing and Printing.

19. The dyeing and printing industry in the City of Bombay is mostly in the hands of the artisans who have come from Cutch and Kathiawar. The size of a dyeing establishment varies a great deal. The investigator came across establishments employing from 2 to 300 workers. The raw materials required in the industry are all locally purchased. An establishment employing about 12 workers needs generally raw materials worth about Rs. 250 per month. Most of the *karkhandars* secure orders from the silk and cloth merchants of Bombay and outside, by personal canvassing. The rates charged vary from $1\frac{1}{2}$ to 2 annas per piece of 25 yards. The owners of these establishments complain about both internal and external competition. During the last 10 years the dyeing charges are reported to have gone down considerably mainly due to Japanese competition.

20. The *karkhandars* engaged in the printing trade do work on a contract basis. People bring their *patals*, *sarees*, etc., for printing purposes and charges are fixed according to the nature of work. The artisans employed by these *karkhandars* generally earn about 8 annas as wages per day when work is available. In this industry also there is reported to be a good deal of competition from Japanese printed goods.

Cotton Cleaning.

21. There are several cotton cleaning factories in the City. They purchase waste and rejected cotton from the local cotton textile mills and clean it. One such mill visited by the investigator has machines worth about Rs. 3,000 and employs 10 workers. About 60 cartloads of such cotton is purchased every month. The cleaned cotton is used by poor people for preparing pillows, beds, etc., and the cotton dust is used mostly for manure.

Manufacture of Thread.

22. There are several factories in the City making cotton silk and woollen threads from local and imported yarns. The factories supply mostly local and provincial markets and have to compete against imports from abroad.

Cap-making.

23. The investigator visited four shops where caps are prepared. They are small establishments where not more than one or two workers are employed on piece-work basis. The raw materials used are cloth, leather, etc. A sewing machine forms a necessary part of the equipment. The caps are sold at the shop itself. The artisans state that the demand for the more costly kinds of caps has fallen off a great deal in recent times and that the outlook for this industry is gloomy.

Metal Works.

24. The investigator visited a factory manufacturing brass circles from old copper pots and brass scrap, and three factories manufacturing aluminium, brass, copper, German-silver and rustless steel articles and utensils with the help of machinery. He also interviewed two *karkhanas* producing brass and copper utensils by hand-tools and five outworkers.

25. The factory manufacturing brass circles employs about 60 workers. The main difficulty of this factory is about getting adequate supplies of scrap raw materials. The owners of the factory request that the import duties on some of their raw materials should be reduced. They also stress the need for expert technical advice.

26. As regards the factories producing brass, copper and aluminium utensils, these produce all sorts of kitchen utensils and metal goods. A few of them have begun to manufacture new products like lamp fittings, shades, etc. The smaller factories mostly confine their attention to the local market but the bigger ones send their goods throughout India. Of the three establishments visited by the investigator, the largest produces both for internal markets and markets outside India but it is not able to export any brass goods at present due to severe foreign competition in the external markets. It is, however, affirmed that there

is ample scope for such exports, if Government can give concession of drawback of duty on the exports of brass goods as is given in the case of aluminium goods.

27. As regards the aluminium goods, it is stated that there is keen competition amongst the Indian, English and American owned pressing factories. Moreover, in certain new lines of production such as electric goods Japan and Germany are alleged to be dumping their products on the Indian market. Other difficulties in the way of the Indian producers are: (1) heavy freight charges, (2) high charges for electric power, (3) dearth of expert technical advice and (4) want of proper financial support. The smaller establishments are particularly worried a great deal about the financial handicap. The bigger manufacturers maintain that if they are helped by Government in their difficulties stated above, particularly in being given tariff concessions on basic raw materials, they can venture to manufacture semi-raw metal goods such as sheets, circles, etc., which are now almost wholly imported.

28. The employers who prepare different sorts of household utensils without the use of machinery, are generally small contractors providing work to a few out-workers. They purchase copper and brass sheets from the local market and distribute the same among their outworkers. They have contracts with some of the bigger brass and copper utensil dealers of the city by which they are bound to supply all their production to them, in return for which finance is provided by these dealers without interest. These employers do not own any tools of their own nor do they give any advances to their outworkers. Piece-wages are paid according to the nature of the work. As already pointed out, most of these producers do not market their goods independently, but regularly supply the requirements of the bigger dealers. A few, however, sell their products themselves through the shops owned by them. These people complain bitterly against the competition of the factories producing copper and brass utensils with power-driven machinery. Moreover, hand-made articles from Poona and Nasik are said to be preferred by many Bombay dealers as these products have established a name in the market. The result of all this is a considerable restriction of their activities. These small employers, therefore, urge that there should be restriction on factory production, and that the import into Bombay of Poona and Nasik hand-made articles should be banned. They also want to be supplied with finance at low rates of interest for purchasing their raw materials.

29. The piece-workers in the City are estimated to number more than a thousand. The nature of their work varies considerably. A few are engaged in polishing and tinning the brass and copper vessels; some others do rivetting work; and a number of them are engaged in preparing brass and copper utensils used for ordinary household purposes. They all state that there has been a considerable deterioration in their wage position. It is stated that whereas the wage paid in 1921 for preparing utensils out of one maund of copper-sheets was Rs. 8, to-day it is only

Rs. 1-12-0. Similarly, in the case of rivetting work, about five years back the wage paid was Rs. 3 for rivetting 100 articles of a particular type ; now it does not exceed Rs. 2-8-0. This lowering of the wage rate is ascribed to internal competition between the outworkers and the slackness in trade. The result is a steady reduction in the income of the outworkers ; and the monthly income of a worker working 10 hours a day is placed at about Rs. 20 to Rs. 22 per month. Many of the workers, however, do not get this amount, as they do not obtain full employment.

Goldsmiths and Silversmiths.

30. There is a large number of goldsmiths and silversmiths in the City. They mostly work to order. Sometimes the customers themselves supply them with silver or gold and get them to prepare the ornaments of required shape and size. When no such work is available, some of these artisans approach the dealers in gold and silver articles and ornaments. In most cases, the cost of tools and appliances used by them does not exceed Rs. 50. The income of the artisan is estimated to be about Rs. 50 a month during the marriage season. Business is usually very slack during the rainy season.

31. The industry is much affected at present by the changes in fashion and tastes of well-to-do people. It is stated that most of the rich ladies now prefer wearing diamonds and pearls to gold ornaments. Similarly, the demand for silver articles has now considerably diminished as people now go in for articles made out of rustless steel. The goldsmiths demand that there should be some restriction on the sale of rustless steelware. They also plead for a substantial lowering and stabilisation of gold prices. It is stated that due to constant fluctutions in gold prices, people are loth to invest money in ornaments. Their other demands are : (1) an embargo on gold exports, (2) reduction in the rents of their premises, (3) appointment of an expert to guide them in devising new designs and (4) removal of the import duty on silver.

32. Besides these artisans, there is a good number of small concerns specialising in the production of silver ornaments worn by the poorer sections of the community. This kind of work consists of two parts. The first is the drawing of wires from the silver ingots and the second is the preparation of the ornaments. The latter is everywhere a handicraft industry. But in the former both machinery and hand processes are employed. It is estimated that in 10 concerns such machinery is utilised, and that in 20 others the work is done by hand.

33. The investigator visited a concern where the whole of the work is done by hand. The equipment consists of a few dies, hammers, anvils, etc. Work is brought to the *karkhana* by shop-keepers who deal in silver ornaments and the *karkhandar* is given his charges according to the type of product. The *karkhandar* earns about Rs. 40 per month. The owner of the concern complains of the competition from the owners of wire-drawing machinery. They have reduced the rates for wire-drawing to such an extent that hand-workers are said to be finding it very difficult to compete with them.

Silver and Gold Melting.

34. It is reported that there are in the city 9 shops employing about 125 people who are engaged in melting gold and silver bars, ornaments, etc. The investigator visited one of these shops. Here about 10 people are employed on a monthly wage of Rs. 20 to Rs. 25. Customers come to the shopkeeper with their ornaments, pieces of the precious metals, etc., for melting purposes. His charges for melting are 2 annas per 100 tolas of silver or gold. It is reported that there is a good deal of local competition in this line as a result of which there is said to have been a steep decline in rates.

Preparation of German-silver Utensils.

35. The investigator visited a *karkhana* wherein German silver utensils are produced. Here about 12 artisans work with their own tools. The *karkhandar* produces German-silver utensils of various shapes and designs of the value of Rs. 60,000 per year. There is a Union of these *karkhandars* and the selling rates are fixed by the Union. It is, however, alleged that though rates are thus officially fixed, underhand dealings are a common feature and this is said to stand in the way of the industry. The *karkhandars* desire a reduction in the rents of the premises and financial accommodation at low rates for purchasing raw materials.

Electro-plating.

36. The investigator interviewed two *karkhandars* who carry on electro-plating business. One of them employs 6 workers and the other 4. Electro-plating is done on articles of copper, nickel, brass, etc. The charges are generally six pies per pound. The market is local but the future of the industry is said to be gloomy due to intensive internal competition. The workers are paid 8 annas to a rupee per day according to the nature of work done by them.

Iron Foundries.

37. There is a good number of iron foundries in the city. The investigator visited five of these. Some of these foundries are engaged in producing manhole frames and covers, pipes, plumbers' requisites, etc., and some others are manufacturing building materials and hardware. These foundries vary greatly in size. Most of these establishments cater for the needs of the City. It is reported that these concerns are doing well. They, however, complain about the great rise in the price of cast iron scrap and the severity of the foreign competition.

Tin and Iron Drum Manufactures.

38. There is over a score of power driven factories in the City equipped with all the latest types of machines for the manufacture of all shapes and sizes of boxes and drums, pails, buckets, tubes, etc. The

markets for their manufactures are to a great extent cigarettes, biscuits and confectionery factories. The products are also sold in large quantities to grain merchants and other local retail consumers. Part of the output is also sold to other provincial markets.

Manufacture of Safes, Steel Cup-boards and other Steel Furnitures.

39. There are four large factories equipped with all labour-saving, power-driven machines and these factories turn out very good articles which can bear competition with any similar imports. Besides these large-unit factories, there are several small shops which also manufacture such articles.

The raw materials are to a large extent supplied by the Indian steel factories. The complaint made is that due to protective duties the local production prices are high in comparison with imported articles. Besides the difficulties of supplies of raw material, there is also very sharp internal competition.

Household Steel Furniture.

40. There is a large number of small concerns engaged in preparing household steel furniture. The equipment of an average concern consists of electric motors, drill machines, punching machines, lathes, etc. Excepting for Tata iron, all other raw materials are foreign. Most of these concerns have their own shops for marketing their products. The owners of these establishments are of opinion that protection to the Indian steel industry should be given by a bounty and not by an import duty as the latter hinders the development of their industry by raising the cost of production. Another difficulty facing them is the fierce internal competition. They also complain about the high level of rents for their premises, and further they require cheap finance for reorganising their works.

Clock Manufacture.

41. The investigator visited a clock manufacturing company which has been started recently. It manufactures wall-clocks, tower-clocks, etc. The different types of clocks manufactured by the Company are sold throughout India.

42. The owner of the concern states that the industry has a bright future before it, provided Government takes some interest in it. He suggests that Government should arrange with the foreign clock-manufacturing countries to get permission for the Indian industrialists to see the actual working of their clock factories. Government, it is also suggested, should purchase Indian clocks, reduce the railway freights and advance capital at low rates for purposes of expansion of the industry.

Assembling of Harmoniums.

43. The investigator interviewed the owners of two concerns engaged in making harmoniums. The raw materials required for the industry are purchased locally. The harmoniums are sold in the City and also sent out to Colombo. The demand is somewhat brisk in the month preceding *Divali*. It is stated that the industry is a profitable one. But recently the demand is said to have decreased due to competition of cheap low-priced harmoniums made of inferior materials. It is also alleged that the profitable markets in Africa and Singapore have now been lost to Japan mainly due to the depreciation of the Yen.

Manufacture of Incandescent Lamps, Lanterns, etc.

44. The investigator visited a factory in the City, producing incandescent lamps, lanterns, mantles and stoves. It employs about 50 workers. The materials used are tin plates, brass sheets and galvanized iron sheets, etc. The products of this factory are sold all over India. The factory is meeting with competition from Japan and Germany. The owner suggests that Government should give some protection against these imports and also lower the duty on the imports of raw materials required for the industry. He also wants a reduction in freight charges and capital at low rates for purchase of the latest types of machinery.

Production of Electric Fans.

45. It is reported that there are only 3 concerns in India manufacturing electric fans. Of these one is situated in Bombay City and employs 200 workers. Excepting pig-iron and coal, all the materials used are obtained from outside. The products are electric fans, water-heaters, transformers and bulb rectifiers. Most of the products are sold in Bombay. The concern is facing severe competition from Japan and Germany. Japanese competition is said to be especially severe. Whereas a Japanese table fan is sold for Rs. 22, this concern cannot afford to sell its table fan for less than Rs. 43. As a result of this competition they have given up the production of table fans, exhaust fans, and D. C. fans. The company wants protection against the competition from these countries and also requests the favour of Government patronage. Lastly, the company stresses the necessity of technical assistance from the State in producing superior quality products.

Assembling of Parts and Repairs of Automobiles.

46. The investigator visited a factory assembling automobile parts. About 600 workers are employed here on monthly wages. The cars and buses assembled in this factory are sold throughout India.

47. The investigator also visited an automobile repairing concern in the City. Here old motor cars are repaired, and repainted, and bodies for motor cars, buses, etc., are built. The number of wage-earners employed varies from 10 to 50. On an average 5 to 6 automobile bodies are built per month. The cost of building a body varies from Rs. 500 to Rs. 600. The raw materials necessary for the repairing work are purchased locally. The repairing work is said to be very slack during the rainy season. It is reported that there is a good deal of competition in this line and that hand-workers are finding it very difficult to compete with workshops where machinery is used.

Tricycle and Cycle Parts Manufacture.

48. There are several factories in the City manuacturing tricycles and cycle parts and the investigator visited one such factory employing about 50 workers. The finished products are marketed throughout India, Burma and Ceylon. The *karkhandar* complains of severe competition from Japan in the tricycle trade. There is also a good deal of internal competition in this type of production and the *karkhandar* wants the Government to bring about some sort of understanding between the local producers. He believes that the industry has a bright future before it and suggests that in order to help it, Government should give a subsidy to the manufacturers (equivalent to the rise in the price of Indian steel due to protection) and also give them loans at low rates of interest. A request is also made about a substantial reduction in freight charges and in the charges for supply of water and electricity.

Battery-charging and Assembling.

49. The investigator visited a *karkhana* where discharged batteries of motor cars, radios, etc., are charged and which also assembles batteries after purchasing the separate parts. The *karkhandar* has an equipment of Rs. 5,000 and feels the necessity of improved appliances for preparing new batteries. His market is local, and he feels the competition from unorganised battery chargers who it is alleged, have no establishment charges to bear. The *karkhandar* is, however, of opinion that there is ample scope for the development of the industry.

Manufacture of Gramophone Parts, Printing Presses, etc.

50. The investigator visited a company recently started in the City for producing some of the gramophone parts. In addition to gramophone parts, printing presses and machinery parts are also produced by this concern. It employs about 40 workers. The raw materials are brass sheets, brass pipes, polishing materials, etc. The products are sold throughout India, China and the Straits Settlement.

51. The main difficulty in the way of expansion is said to be lack of technical knowledge. The proprietor wants Government to give him

expert technical advice. He also urges that the import duties on the raw materials and machinery used in the industry should be considerably reduced. Further a systematic propaganda is also stated to be essential to counteract the general belief in the country that the Indian-made articles are not up to the standard in quality. In this connection, he suggests that certificates of quality should be issued to indigenous products by Government. Finally, he wants Government to impose heavy duties on the imports of gramophones and parts thereof from Japan and other foreign countries.

Surgical Instruments and Hospital Furniture.

52. The investigator visited two *karkhandars* engaged in manufacturing surgical instruments and hospital furniture. One of them employs nearly 400 workers and the other 100. The bigger *karkhana* produces pharmaceutical products, surgical instruments and hospital furniture. The market for these products extends over the whole of India, Burma and Ceylon. Some business is also done with Persia, Aden and Afghanistan. The products of the smaller concern are only sold within the country.

53. It is the considered opinion of these producers that all aseptic hospital furniture and surgical instruments needed by Government and semi-Government hospitals should be purchased from within the country, especially when the *swadeshi* products are of the same quality and compare very favourably in prices with the imported products. The manufacturers state that they are very much handicapped in the production of pharmaceutical products, because of the import duty on crude drugs. It is contended that as India does not produce these drugs, no duty should be imposed on these essential imports. They also suggest that the present heavy railway freight charges, should be substantially reduced and that loans should be given to them at low rates of interest for the purchase of improved machinery.

Furniture Industry.

54. There has been a remarkable development of the furniture industry in the City during the last 10 years and there are now many *karkhanas* engaged in the industry. The investigator visited a *karkhana* where machinery is used, and ten other smaller establishments. The big *karkhana* employs electrically run machinery and gives employment to 300 workers. These are paid daily wages varying from 10 annas to Rs. 2-8-0 each. The total capital invested in the concern is stated to be about Rs. 4 lakhs. The main work consists of preparing all sorts of furniture, although sawing work for orders is also undertaken. For the furniture work mostly Burmese teak is used. Most of the raw materials used are foreign. It is stated that though Kanara teak is excellent for furniture work, it is not possible to use it on account of the heavy freight charges, particularly in these days of severe internal competition. The products of the factory are sold throughout India

both directly and through agents stationed at Calcutta, Ahmedabad, Lahore, etc. The concern also widely advertises its goods through the newspapers and by taking part in various industrial exhibitions held all over India. It also maintains a show room.

55. The smaller *karkhanas* where work is carried on mainly by hand vary a great deal in size, and the number of workers employed in these concerns varies from 2 to 50. In all these *karkhanas* the wage-earners are mostly paid on a piece-rate basis. The demand for furniture is somewhat slack between June and August. The finished materials are mostly marketed in the City but a part of the production is also sent to distant centres like Belgaum, Broach, etc. Most of the small concerns sell their products by personal canvassing and only for cash. They cannot afford either to advertise or to appoint agents.

56. The main problems confronting the industry are over-production and severe internal competition. The number of *karkhanas* in the City is said to be far in excess of the real requirements of the market. It is suggested that entry into this trade should be licensed or that Government should encourage the formation of an association for the industry to regulate internal competition and fix a standard wage schedule for the workers. It is also suggested that the provincial Government should move the Central Government to abolish the existing duty on the raw materials used in the furniture industry. With a view to encourage the use of the raw materials of the Province itself, the *karkhandars* suggest that Government should arrange for the sale of Kanara timber in convenient standard sizes and at cheap rates. Many of the *karkhandars* also stress the urgency of an Industrial Bank for supplying them with long-term credit, as such credits will enable them to season their wood by purchasing it ahead of requirements. It is stated that seasoned timber gives excellent results and the customers can then be guaranteed the durability of the furniture. Finally, the need for making people more furniture-minded is also stressed by them.

Manufacture of Textile Wooden Parts.

57. The owner of a *karkhana* manufacturing textile wooden parts was interviewed by the investigator. The *karkhana* employs about 75 workmen. The factory manufactures pirns, heald staves, comber boards, reeling pegs, etc. These are used by the cotton, silk and woollen mills all over India. The *karkhandar* pleads for more patronage from the Indian mills. He is also in need of technical assistance in the management of his workshop. Further he points out that the import duty levied on the wood that is imported by him is higher than the duty on the finished products imported from abroad. This is said to place the Indian manufacturer at a disadvantage. He suggests, therefore, that either the duty on the imported wood should be lowered or the duty on the finished products should be raised.

Manufacture of Healds and Reeds.

58. A factory producing healds and reeds was visited by the investigator. The raw materials used are cotton yarn, varnishes, round and flat reed wire, reed ribs, reed pitches, etc. The healds and reeds manufactured by this factory are sold throughout India.

The factory is facing severe competition from Japanese and English products. The *karkhandar* urges that the import duty on healds and reeds should be raised, and that the import duty on raw materials such as varnishes, reed ribs, reed pitches, etc., should be substantially reduced. Here also, the owner points out that the finished products imported into India are charged a lower import duty while the materials from which these products are made, have to pay a higher import duty.

Preparation of Cradles, *Pats*, etc.

59. The investigator interviewed a carpenter engaged in preparing cradles, *pats* or wooden seats, stools, etc. He purchased the raw materials locally and with the help of a labourer prepares articles worth about Rs. 250 to Rs. 300 per month. He sells direct to his customers and occasionally sends the wage-earner to hawk some of the products from street to street. He estimates his monthly income at about Rs. 30 per month.

60. The carpenter states that due to the use of ready factory-made wooden articles, in building work, the services of carpenters are not now-a-days much in demand. Secondly, the competition from substitute products like iron chairs, racks, etc., has seriously affected the carpenters' industry. The carpenter suggests that Government should assist him by selling timber on their own account at a cheap rate instead of leaving it to contractors. He further states that an appreciable lowering of the import duty on methylated spirit used in polishing, will help him to sell his product at a lower rate. His other demands are about reductions in house rent and financial accommodation at low interest rates.

Preparation of Packing Boxes.

61. The business of preparing packing boxes is mostly in the hands of poor and illiterate artisans. It does not require much capital. Old packing boxes are purchased and new ones are prepared out of them. For preparing one box, about 2 hours are required. It is sold generally in the local markets, at rates varying from 6 to 8 annas per box. The artisans put their income at about Rs. 20 per month per worker. Their main complaint is that there is not enough work to engage them throughout the year, the demand becoming slack during the rainy season. Another difficulty before the workers is the dearth of sufficient working capital.

Frame Making.

62. The investigator visited an establishment where picture-frames are manufactured. He also met three artisans engaged in putting into frames pictures, photographs, etc. The *karkhana* manufactures frames with the aid of machinery run on electricity. It gives employment to nearly 30 workers on a piece-rate basis. The frames are made of Burma teak, and are sold to *Bohras* and merchants from the Deccan at rates varying from Rs. 1-2-0 to Rs. 2-4-0 per 100 feet. The proprietor of this *karkhana* states that he is trying to produce a new type of plaster frame and wants Government help in supplying him with cheap softwood suitable for the purpose. He complains about the competition of small producers who sell their frames at 4 annas less per 100 feet than the usual market price.

63. The artisans who frame pictures, photographs, etc., possess simple tools and appliances. They employ one or two workers to assist them on a monthly wage varying from Rs. 15 to Rs. 25. The requisite materials for their work such as frames, glass, cardboards, etc., are locally purchased. The work is done to meet local orders and on an average a shop-keeper is said to get about Rs. 50 per month for himself. The general complaint in the industry is one of severe internal competition.

Bamboo and Cane Work.

64. The investigator interviewed a basket-maker and a cane-worker in the City. The basket-maker buys bamboos from retail merchants at the rate of 5 to 6 per rupee. From one bamboo, about 3 baskets of average size can be prepared and two men can prepare 4 such baskets in a day. The selling price of the baskets is about 3 to 4 annas each. Apart from baskets, mats, shutters for windows, etc., are made and marketed through the shop maintained by the worker. Most of the artisans are stated to have their own shops. The income of each artisan in the family is estimated to be about Rs. 6 per month. The demand for bamboo products is going down very fast. A few years back there was a very good demand for bamboo *karandis* (closed baskets) for exporting onions out of Bombay. But the merchants are now using gunny bags and a profitable source of income has been lost to the basket-makers. The artisan interviewed requests that bamboos should be made available to him at cheaper rates. He also wants a reduction in the rents of his premises.

65. The cane worker prepares children's chairs, small tables, cane boxes, etc., out of canes and bamboos purchased from retail dealers. Canes are purchased at the rate of ten annas a pound. He requires about 5 to 6 lbs. of cane in a week. The finished products are sold by personal canvassing. The income of the artisan is estimated to be Rs. 5 to Rs. 6 per month. During the rainy season when the demand for their products is slack the condition of these people is reported to

be very pitiable. The cane worker requests that Government should patronise his products and should also supply him with capital for the purchase of raw material.

TANNING.

66. Bombay City is the largest centre in the Province where "half tanned" leather, vegetable tanned and finished leather, chrome leather and leather articles are manufactured. The tanning centre is located at Dharavi. The investigator visited two large tanneries, two independent tanners following the crude old processes and two others engaged in dyeing and finishing leather.

67. Of the two tanneries visited by him, one is a large scale tannery and is owned by a limited company. The number of people employed varies from 150 to 225 and the capital invested is reported to be nearly Rs. 1½ lakhs. This factory tans about 220 raw cow-hides and 50 raw buffalo-hides in a full working day. The raw hides are purchased from Dharavi and Bandra and sometimes obtained even from Cawnpore and the Nizam's Dominions. The tanning materials used are *harda*, lime, *turvad* bark, *babul* bark and chemicals for chrome tanning. The tannery produces three kinds of leather: (1) finished chrome leather, (2) vegetable tanned sole and harness leather and (3) leather for ginning mills. The finished chrome leather is exported mainly to London; the sole leather and harness leather is meant for Baghdad and Iran and the leather for ginning mills is consumed mostly within the Province.

68. The second tannery which is a proprietory concern employs about 20 to 22 workers in its tanning department. It tans per month about 300 cow-hides, 5,000 sheep-skins and 3,000 goat-skins. The cow-hides are mostly purchased from Dharavi, whereas the sheep-skins come from Basrah and Quetta and the goat-skins from Africa and Aden. All the leather produced is used for making suit cases, bags, *champals*, hand-bags, etc. Sometimes the quantity of their own finished leather is inadequate and they have to buy additional leather from the market. In the leather goods making section of this factory about 150 persons are employed. The finished products are sold through two shops maintained by the concern.

69. Both the tanning concerns complain that the raw hides supplied by and obtained from the slaughter houses are not properly flayed. The tanners also stress the urgency of developing a tanning extract industry. According to them the tanning materials found in abundance in the forests, can very well be utilised for the manufacture of tanning extract. They, further, stress the necessity of: (1) improving the breed of the cattle in India and feeding them properly, (2) of abolishing the import duty on wattle bark extract, and (3) of securing favourable trade terms with the United Kingdom.

70. The tannery using its finished hides in its own leather works urges that Government should patronise only Bombay Province products, use their good offices with the Municipality to lower the water

rate and further minimise competition from small producers by fixing prices for standard articles. They also urge the need for lowering railway freight so that they can extend their markets.

71. In addition to the two tanneries, there are reported to be about 80 independent tanners at Dharavi. They tan mostly by the crude old processes. The raw hides of cows and buffaloes are locally purchased. Usually a family of two tanners can tan 15 to 20 hides in a week; The market for their finished products is local. The income earned by such a family is estimated at about Rs. 15 per month. The main complaint of these tanners is that they do not get good raw hides as the big tanneries enter into long term contracts with butchers and monopolise all the better quality hides. This is said to have lowered the quality of their finished products and resulted in a decline in demand. These tanners are reported to be also in need of education in better methods of tanning.

72. At Dharavi a few people are also engaged in finishing leather for harness and belting. The processes are very simple. The dry leather is damped and scoured. It is then set out and a little dubbin (a mixture of tallow and oil) is rubbed into the flesh as well as into the grain after which the hides are hung up to dry. They are then left in a pile for a short time to become mellow and subsequently cleaned on the flesh and the grain. This business is mostly in the hands of Madrasis and Muslims. The investigator interviewed two artisans engaged in this trade. It is stated that these people have to purchase their dry leather on credit from merchants to whom they have to sell back the finished products and the workers feel that this gives an opportunity to the merchants to fleece them at both ends. It is reported that a family earns about Rs. 25 to Rs. 30 per month from this industry. The most urgent requirement of these people is cheap credit. They also plead for a reduction in the rent of the pits used by them.

Manufacture of Shoes and Sandals.

73. There is a large number of small workshops in the City where shoes and especially sandals are manufactured. A shop is generally rented by a well-to-do *mochi* who employs from 7 to 8 workers under him on a piece-rate basis. In some workshops a sewing machine is used; in others, stitching is done by hand. The workers bring their own tools and the leather is supplied by the employer who buys it in the local market. It is estimated that an owner earns about Rs. 40 to Rs. 50 per month while the workman gets Rs. 25 to Rs. 30. It is stated that since recently the control of these workshops is passing into the hands of capitalist financiers.

74. The *mochis* complain about the steep fall in prices of their products and about the severe competition of imported and factory-made shoes. They also complain about the deterioration in the leather produced by local tanners.

Rubber and Canvas Shoes.

75. The investigator visited a factory producing rubber and canvas shoes, where nearly 250 people are working. Some of the raw materials are imported from Germany and Japan ac these are reported to be either costly to make, or not available in the country at all. The rubber and canvas shoes are sold throughout India and also sent to parts of Africa. The owner of the factory wants protection against the keen competition of the foreign-owned large-scale factories in India. He wants that the import duties on the raw materials needed in his industry should be reduced. Further, he wants finance on cheap terms, and reduction in the electric, water and freight charges.

Mango Canning.

76. India is famous for her mangoes, delicious in taste and rich in vitamin contents. The difficulty, however, is that it is a seasonal fruit and has to be canned if it is to be made available throughout the year. This is sought to be done by a cannery established at Chinchpokli. It claims to be the first of its kind in India to be organised on a thoroughly scientific basis and is conducted under expert supervision. The working season of the factory is from May to July and about 150 people get employment during this period. In the slack season, only 15 workers are employed.

77. The plant of the cannery is worth about Rs. 50,000. The greater part of it was made to order by a reputed firm of canning machinery manufacturers of America. A part of it was also locally manufactured. The various implements used in peeling, slicing, churning and other processes of manufacture, are of stainless steel.

78. The cannery purchases the best mangoes from Ratnagiri, Thana and Bulsar. Last year about 6 lakhs of Alfonso mangoes were purchased at rates varying from Rs. 4 to Rs. 8 for a basket of 6 dozens. The company has also in the last season added to their list of canned products plums, pears, tomatoes, etc. The mangoes are obtained from long established dealers in the trade. The other fruits are obtained through the Bombay wholesale market.

79. The manager of the factory states that the mango crop can be much increased and the fruit made available at cheaper price. For this the trees have to be properly watered, manured and cared for. Moreover, new plantations of fruit trees can be grown on the waste lands and the slopes of hillocks as is being done in California. It is also suggested that Government should give forecasts of first yield from year to year, as without this it becomes difficult for the manufacturers to accept in advance the contracts for the finished products. Further it is suggested that the railways should make special arrangments for the transport of fruits. Freight charges are reported to be unduly heavy and it is urged that they should be reduced. Finally, the Manager

suggests that the present import duty on bottles and cans used in the trade should be considerably reduced.

80. The market for the finished products is international. Agents are appointed in big centres like London, some cities in China, Calcutta, Lahore, etc. Advertising is also undertaken on a very wide scale. Last year about 3,00,000 tins were packed in the factory and the whole of this production is stated to have been easily marketed. It is maintained that there is good demand for the products in the international market, though the same cannot be said of the Indian market.

81. The factory, is stated to suffer from the competition of small *karkhandars* who it is alleged, use crude processes and sell their products at low prices. In addition it also feels very severely the competition from countries like the U. S. A., Australia, England, etc., in both the internal and external markets.

82. The various demands put forth by this cannery in order to further the development of the canning industry may be summed up as under :—

(1) Small and uneconomic units should be discouraged.
(2) The duty on imported canned fruits should be raised.
(3) The import duty on tins and cans should be reduced.
(4) Uniformity should be maintained in octroi duties, and
(5) The industry should be kept in touch with the latest technical information regarding the canning industry abroad.

Fresh Fruit Juices.

83. The investigator visited a concern where fruit juices of various kinds are preserved without chemical preservatives. Throughout the year about 18 workers are employed on daily wages varying from 12 annas to Rs. 1-4-0. The equipment of the establishment consists of fruit presses and sterilizers. The *karkhana* prepares fruit juices out of oranges, pine-apples, lemons, grapes, mangoes, tomatoes and cane sugar. A serious difficulty in the way of the expansion of the industry, is reported to be the absence of a glass factory which can supply the required number of bottles of standard type and good quality. Bottles are now ordered from Germany and the freight charges are stated to be heavy. The bottles of fruit-juice are sent all over India through agents located in big centres like Nagpur, Calcutta, Lucknow, etc. About three-fourths of the production is sent out to centres other than Bombay. It is stated that there is a good margin of profit in the industry. The promoters of the concern are confident that the industry is capable of much expansion. They require Government to give them protection by means of an import duty against powerful foreign competitors. They also suggest that the railway freight charges should be considerably reduced. Further, they require Government to educate the people in dietary matters, especially with regard to the importance of fruit consumption.

Aerated Water Manufacturing.

84. There are many aerated water factories in Bombay City. Three of these were visited by the investigator. Each one of them employs more than 50 workers. The machines ordinarily used by them consist of gas servers, syrup manufacturing machines, hand fillers, generators, washing machines, etc. The demand for these drinks is very brisk during months of March to June.

85. For preparing various kinds of mineral waters, soda bicarb, sugar, saccharine, colours, essences, bottles, etc., are necessary. Of these only sugar is Indian and the rest are imported from outside. Most of the factories produce soda, lemon, rose, orange and other kinds of aerated waters. It is estimated that the cost price of soda-water comes to about 5 to 5½ annas per dozen bottles. These are sold wholesale at 6 annas. The aerated waters are sold in the City and the Suburbs.

The general complaint is about the internal competition. It is stated that as the use of saccharine instead of sugar substantially lowers the cost of production it is being used by a number of producers.

Bakeries.

86. There are a number of bakeries in the City, the bigger ones making bread, biscuits, etc., and the smaller ones, particularly those situated in working class localities make only cheap buns and biscuits. The investigator visited six bakeries. Generally speaking establishments employing more than 20 workers use either mechanical or electric power. The rest have old fashioned furnaces in which either fire-wood or coal is burnt. Some of the bakeries are owned by restaurant keepers. The bakeries generally purchase their requirements of flour ghee, sugar, butter, etc., locally. Cakes, biscuits, bread, etc., prepared by these bakeries are mostly sold in the City. Some of the bigger bakeries also market their products outside the City. Demand for bakery products is very brisk during the X'mas season.

Production of Butter.

87. The investigator visited a big dairy, using power-driven machinery and 4 other smaller dairies. Most of the dairy owners are members of the Butter Manufacturers' Association. The big factory has a branch at Anand and employs nearly 330 workers. It has an equipment of about Rs. 10 lakhs. It produces butter, coffee and casein. Two-thirds of the production, however, consists of butter. Most of the raw materials are locally purchased. The products have an international market.

88. The smaller dairies own one or two churning machines. They get the cream mostly from Anand and other adjoining centres in

Gujarat. Tins, packing and other materials are purchased locally. The butter produced is mostly sold in the City and also exported to Goa, Ceylon and Africa. The ordinary price of butter varies from 10 to 14 annas per lb. A few of the dairies also maintain milk bars.

89. The dairy owners emphasise the urgent necessity for Government taking active steps to improve the breed and milk-yielding capacity of the Indian milch cattle. It is stated that if this is done, Bombay can become a big export centre for butter. Even within the country there is said to be considerable demand for good quality butter. The need for cold storage facilities on railways is also emphasised. It is also stated that the producers of cream at the production centres need education in sanitary matters. Further there is a strong complaint against the competition from adulterated butter and the dairy-owners urge that there should be heavy punishment for people making or trading in adulterated butter. Lastly, the dairy-owners suggest that there should be grading of butter according to quality, and strict enforcement of correct declarations on labels.

Powdering of Coffee Beans.

90. The investigator interviewed an artisan preparing coffee powder from coffee beans. He works by himself and imports raw coffee beans from Coimbatore. The coffee beans are powdered with the help of a grinding machine and the finished product is sold locally. It is stated that due to intense internal and foreign, especially French, competition there is no adequate return from this business.

Production of Pickles, *Masala*, etc.

91. The investigator interviewed a *karkhandar* producing pickles, *masalas*, etc. It is stated that the *karkhandar* practically started with no capital but to-day has about Rs. 30,000 invested in the industry as a result of saving from the profits. He employs about 34 workers who are paid on a monthly basis. The pickles, jams, *masalas* and other products are produced from chillies, sugar, lemons, mangoes, etc., and the monthly sales come to about Rs. 6,000. The preparations are popular throughout India and are sent even to England and Africa. The industry is reported to have good potentialities for expansion.

Confectionery.

92. The investigator interviewed the proprietors of two confectionery works. One of them employs nearly 60 workers and the other about 10. The bigger *karkhandar* has machinery worth about Rs. 75,000 and prepares all sorts of confectionery products. These are marketed all over India through merchants and agents. It is stated that the

karkhana has now given up the production of toffee, as it cannot compete with Japanese imports. The smaller *karkhana* produces mainly for the local markets.

93. The general complaint in the trade is about the internal competition. The bigger *karkhandar* wants an appreciable reduction in railway freights so that he can expand his market. He also wants protection against foreign confectionery, especially Japanese toffee.

Flour Mills.

94. The investigator visited three flour mills. Two of these are big mills and are owned by one company. The third is comparatively a small mill. In the two big mills owned by the company, about 500 workers are employed. Various grades of flour are produced and sold in India, Burma, Ceylon and other overseas markets. The other flour mill has 16 workers. The flour is sold locally and also to a small extent in South India. The proprietor of this mill complains about the intense competition from other flour mills. According to him, there are no prospects in the industry unless competition is regularised.

Production of Vegetable Oils.

95. The investigator visited a factory, where refined vegetable oils, vegetable margarine and other vegetable products are manufactured from the indigenous vegetable oils. It is owned and managed by Europeans. The factory is equipped with machinery of the latest type and its products are sold all over India and Burma. About 500 people are employed here. The only difficulty mentioned by the concern is the shortage of sweet oil tank wagons for transporting the supplies of raw materials from up-country to Bombay.

Soap Industry.

96. The investigator visited three *karkhanas* and two factories engaged in the manufacture of soap. Both the factories have up-to-date and costly equipments. Raw materials used are all kinds of vegetable oils, caustic soda, silicate of soda, fats and resin. Among the vegetable oils, cocoanut oil is imported from Ceylon. Both washing and toilet soaps are produced as also face powders and hair oils. The products are sold throughout the country.

97. The *karkhanas* work with hand presses. They use cocoanut oil, caustic soda, silicate of soda and resin. Most of them prepare only washing soaps. The soaps are marketed mostly in the Province and sometimes sent to other provinces as well. These *karkhandars* complain about the high freight rates and octroi duties they have to pay both on the raw materials and on the finished products. They also complain about the import duty on chemicals. The greatest problem for them is,

however, that of the competition of the organised factories, both foreign and Indian. It is alleged that in the absence of any laws restricting the percentage of fatty substances in the soap, many inferior quality soaps are sold in India. They suggest, therefore, that the percentage of fat in soaps should be fixed and marked on every cake of soap as is done in some other countries. They also suggest that Government should make available to them expert technical advice and further that Government should give publicity to their products.

Chemical Works.

98. The investigator visited two chemical works. One of them has an investment of more than Rs. 1 lakh in the concern and employs 30 workers. It imports various aniline dyes from all parts of the world and reduces and mixes them to produce a variety of shades and strengths of dyes and packs them in tins. The tins are sold throughout India. The concern is facing serious competition from foreign imports.

99. The other concern has an investment of Rs. 50,000 and employs nearly 85 workers. It imports soda ash and caustic soda from abroad and prepares sodium silicate, adhesives, etc. Its products are sold in India and East Africa. There is a complaint about the heaviness of the railway freight charges, and also about the severe competition from Japan in sodium silicate. The owner of the concern needs finance to go in for improved equipment and feels that Government should come to his assistance.

Perfumery Products.

100. The investigator interviewed two establishments engaged in this industry. One of them uses electrically run machinery and has an equipment of the value of Rs. 1 lakh. It employs nearly 25 workers. Its requirements are oils, chemicals and bottles. The bottles are all foreign but some of the oils and chemicals are Indian. Hair-oils, soaps, brilliantine, toilet powders, etc., are produced and are sold both in the local and outside markets. The other concern is a small one and employs only 2 workers. The work here is done mainly by hand. For producing face creams, powders, etc., pure vaseline, chemicals, etc., are used. The products are marketed throughout India. The main demands of those engaged in this industry are :—(1) lower freight rates, (2) refund of the excise duty levied on the rectified spirit that is used in their preparations and (3) finance at cheap rates for the purchase of machinery.

Udabatti Production.

101. The investigator visited an establishment where three partners are preparing *udabattis*, during their off time. They locally purchase the raw materials required and prepare *udabattis*. These are sold in

the City, Sholapur and Kolhapur. It is stated that there is no regular demand for their *udabattis* but being a side-business, it yields them some profit.

Bidi Making.

102. The investigator reports that *bidi*-making is a widely followed occupation throughout the City. The work is being carried on mostly in small and ill-ventilated places, where the workers are crowded together and there is hardly any elbow room between them. The hours of work are not regulated and many smaller workshops are open day and night. Women are largely employed. The workers are paid on piece-work basis. The investigator interviewed some of the employers and wage-earners in the trade.

The size of the *bidi* shops varies a great deal and the number of workers employed therein varies from 2 to 75. In most cases a *bidi*-making *karkhana* has its own shop. Three kinds of *bidis* are generally prepared; (1) *tokadi*, (2) *beech-band* and (3) *sadi* (ordinary). On an average a worker gets an income of Re. 1 per 1,000 *bidis* in the case of *beech-band* and *tokadi* and 12 annas in the case of *sadi bidis*. A good worker can prepare about 600 to 700 *bidis* a day. The demand for *bidis* is greater during winter.

103. The *bidi-karkhandars* urge that the town duty on tobacco should be abolished. Some of the smaller *karkhandars* also want financial facilities at cheap rates of interest. Their other suggestions are: that the existing severe internal competition should be regulated by restricting the number of *bidi-karkhanas* and that the rents of their *karkhanas* should be considerably reduced.

The *bidi* workers who work in these *karkhanas* on piece-work basis, urge that they should be allowed to work in their own homes instead of in the *karkhanas* where there is no space to work freely. The employers, however, seem to be against this suggestion as they are afraid that the workers will then substitute cheaper tobacco and the quality of their *bidis* will suffer. The other demands of the workers are for limited working hours and higher wages.

Art Floorings and Cement Tiles Manufacture.

104. The investigator visited a *karkhana* engaged in the manufacture of cement slabs for flooring purposes. The *karkhana* owns hydraulic presses, planing machines, marble cutting and polishing machines and other equipment. It purchases cement, polishing stones, sand and marbles of various kinds. The marble chips and lumps, polishing stones, etc., are imported from abroad. The tiles, flooring slabs, etc., prepared in the *karkhana* are mostly sold in the City itself, though sometimes they are also sent to up-country centres like Ahmedabad,

Poona, etc. The suggestions made by this *karkhandar* may be summed up as follows:—

(1) restriction on activities of small factories which produce inferior quality goods and spoil the market,

(2) reduction in the price of cement which forms the principal ingredient in tile manufacture,

(3) reduction in freight charges, so that up-country markets could be catered for,

(4) financial accommodation at cheap rates,

(5) a thorough survey of Indian marble quarries with a view to find out whether marbles of various colours can be obtained in India itself.

Pottery.

105. The investigator interviewed some potters in the City. The potters follow the old processes. These artisans seem to be economically in a very depressed condition. They used to get their clay some years back, from Dongri and Reay Road for almost nothing. Now due to the intensive building activities in the City, they have to bring their clay from outside the City limits. This they do by 5 or 6 potters combining and bringing clay from Chembur; the cost comes roughly to Rs. 3 per month for each. The pots and *shegdis* prepared are generally sold in their own localities. A potter's family is estimated to earn about Rs. 10 to Rs. 12 a month. The market for the potters' wares is becoming narrower and narrower day by day. They suffer from the competition from iron *shegdis* and other substitutes like stoves, etc., and from the increasing use of aluminium and other metal wares. The potters view their future with grave misgivings.

Pottery Works.

106. The *karkhandar* interviewed by the investigator has his own factory, where he produces various kinds of articles such as W. C. pans, urinals, wash basins, crucibles, etc. Here about 75 people are employed and the equipment is worth nearly Rs. 80,000. The raw materials of the industry are China clay, quartz, white lead, borax, soda wash, zinc oxide, etc. The goods are at present sold mostly in this Province but the owner hopes to extend his market to other provinces also. The factory has to face competition from foreign imports. The company also feels very acutely the need for additional capital for purchasing raw materials in bulk and the owner requests Government for financial accommodation at cheap rates.

Printing Presses.

107. The investigator visited some of the printing presses in the City. These vary greatly in size. Most of them do binding work and a few are also publishing houses. The bigger printing presses mostly import their raw materials from abroad. The smaller printing presses generally

buy locally their requirements. Orders for printing office requirements advertisement posters, etc., are obtained by personal canvassing but due to competition between the presses, the rates obtained are not very remunerative. The printing press owners stress the need of some kind of organisation by which competition could be eliminated amongst them. Some of the Indian publishing houses also suggest that books printed in foreign countries should not be prescribed for the primary and secondary courses in Indian schools.

Type-Foundries.

108. There is a number of type-foundries in the City. These type-foundries manufacture cast lead types and some other requisites of the printing trade, out of lead, antimony, tin, galvanised zinc sheets and brass sheets. Most of these manufacturers maintain that the import duties levied on their raw materials are heavy and unscientific.

The equipment in a type-foundry consists of type-casting machines, moulds and matrices. The type-casting machines are usually imported from abroad while the moulds and matrices are mostly manufactured locally. Some of the machines are hand-driven and some are power-driven. It is alleged that the duty on hand-driven machinery is higher than the duty on power-driven machinery, and that such differentiation discourages small cottage workers who find it difficult to make use of imported tools. The types manufactured by these Bombay foundries are sold throughout India, and some of them are even sent to Africa, Java and the Fiji Islands, where, however, they have to compete with Japanese and German types. All the *karkhandars* are unanimous in their opinion that the spread of literacy will bring them more and more work. For the present they want Government to purchase their requirements of the "cases", "galleys", "composing sticks", etc., for Government printing presses, from Indian manufacturers. They also want protection against Japanese and German imports of lead types, reduction in the heavy railway freights, reduction in the import duties on raw materials and higher duties on the finished products and finance at low rates of interest.

Manufacture of Ink, Pastels, etc.

109. The investigator interviewed a *karkhandar* producing ink, gloy, pastels, and type-writer ribbons. This *karkhandar* locally purchases his requirements of acids, chemicals, different colours, bottles, etc. His products are sold in India, Burma, Ceylon and Uganda. The *karkhandar* is of the opinion that his industry has a rosy future. He complains, however, about the competition from Germany in pastels and from Japan in chalk and suggests that he should be given some protection against this competition. He also stresses the need for a reduction in freight charges. Finally, he wants finance at cheap rates of interest.

Rubber Stamp Making.

110. The investigator visited two establishments, where rubber stamps are prepared. In one, about 5 men are employed and in the other only two. The bigger *karkhana* utilises rubber sheets, handles, plaster of paris, moulding powder, etc., of the value of Rs. 500 per month. With the help of a rubber vulcanizing machine, worth about Rs. 350, rubber stamps are prepared. The market is mainly local. Competition is said to have become very keen in this industry during the last two years.

Preparation of Brushes.

111. The investigator visited a tooth brush factory which claims to be the only one of its kind in India and also two other smaller establishments producing brushes for industrial use. The owner of the tooth brush factory employs nearly 60 workers. Apart from steel wires and celluloid, his requirements of bristles, fibres, animal hair, wood, etc., are supplied from within the country. Tooth-burshes, toilet burshes and brushes for industrial use are produced and sold throughout India and Burma.

112. The smaller establishments primarily interest themselves in preparing brushes meant for cleaning machinery and floors, although a few of them also produce brushes for toilet purposes. The fibres and steel wires used are foreign but the coir, animal hairs, wood, etc., are Indian. Work is done mostly by hand and the products are sold in the local markets. In addition to these *karkhanas* there are also a few *Bhayyas* at Dharavi and Mahim producing, on a very restricted scale, burshes from animal hair and earning from Rs. 15 to Rs. 20 per month.

113. The owners of these brush factories suggest that the import duty on steel wire should be reduced, that Government and railways should patronise their products, that there should be restriction on the imports of foreign brushes and lastly that they should be given financial and technical assistance.

Possibilities of New Industries.

114. The City of Bombay has practically unlimited possibilities for further industrial expansion. It has all the facilities that make for the successful operation of industries. It is ideally situated for the establishment of numerous large-scale and small-scale industries. The industries which seem to offer considerable scope for establishment in the City can be classed into three groups, viz.. (1) Chemical and electro-chemical, (2) engineering and (3) miscellaneous. In the first group come the industries for the manufactures of aluminium, caustic soda, bleaching powder, potassium chlorate, other chemicals and artificial silk. The recent discovery of large deposits of high grade bauxite within about

20 miles from the City by the Department of Industries should make it possible for the establishment of an aluminium plant near the City. Similarly the raw materials necessary for the manufactures of caustic soda, bleaching powder, potassium chlorate and other chemicals are available within easy reach of the City and it should be possible to manufacture these products which are at present imported in large quantities from abroad. There is a growing demand for artificial silk yarn at present and most of it is being met from imports from outside. The most important basic raw material for the manufacture of artificial silk yarn is cotton linters or cheap quality cotton which is available here in abundance. There appears thus to be great scope for this industry as apart from other advantages, Bombay provides an excellent market for artificial silk yarn and cloth. As regards the engineering industries, some of the productions in this line are; electric fans, transformers, motor and control gear; electric lamps and accessories; builders' and domestic hardware; textile machinery parts, metal lamps, etc. At present these products are largely imported and in a City like Bombay where every kind of facility for industrial development is available, it should be possible to start several industries for the manufacture of these various articles. Among the third group of miscellaneous industries that can be started with advantage in the City of Bombay may be mentioned the manufacture of belting for machinery, of articles from waste cotton, of white lead, bichromates, leather cloth, etc. Similarly the large imports of printed and dyed cotton goods into India, show that there is a good scope for establishing a central dyeing and calico printing plant in Bombay. Further, the City has excellent facilities for the location of an automobile factory. In short, the City of Bombay affords vast scope for the establishment of numerous industries for the manufacture of varieties of products and articles at present imported in large quantities from foreign countries.

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Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders, and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small-scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BOMBAY SUBURBAN DISTRICT.

Area and Population.

The Bombay Suburban district was created in 1920 when the southern portion of the Salsette Island including Trombay and about seven villages around Ambernath was separated from the Thana district. It has an area of only 154 square miles and a population of 179,524. Of these 111,204 live in urban areas consisting of eight towns and the remaining 68,320 live in 87 villages. Of the eight towns the more important are :—

	Population.
Bandra	43,290
Kurla	30,311
Vile Parle	11,290

The proportion of the urban population to the total population is more than 61 per cent.; this is due to the fact that the district is closely connected with the Bombay City and forms a part of Greater Bombay.

According to the Census of 1931 the total number of principal earners in the district is 74,969 of whom 61,016 are males. The occupational distribution of this number is as follows :—

Exploitation of animals and vegetation	15,718
Exploitation of minerals	807
Industry	17,313
Transport	4,986
Trade	7,961
Public force and administration	3,732
Professions and liberal arts	1,901
Living on their income	548
Domestic service	8,251
Insufficiently described	12,328
Unproductive	1,424
Total ..	74,969

The proportion of the industrially occupied persons to the total earners is more than 22 per cent. Besides the 17,313 persons shown as engaged in industries proper, there are 3,607 persons engaged in fishing and 774 persons engaged in salt making. Though these have been included

under "exploitation of animals and vegetation" and "exploitation of minerals" for purposes of Census classifications, they are engaged in more or less industrial occupations. Adding these, therefore, the total number of principal workers who are industrially occupied comes to 21,694.

Health and Medical Facilities.

2. Some indication regarding the health conditions in the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 23·36 while the mean ratio of deaths for the same period was·16·84 per thousand. In fact, the Bombay Suburban district has the lowest birth rate and death rate in the whole of the Province. The survival rate is also very low being only 6·52 per thousand.

As regards medical facilities, there is a hospital at Bandra and another at Kurla. In addition there are dispensaries at Bandra, Andheri and Kurla. At Trombay there is a leper home maintained by private persons. Being near the City of Bombay, the district has better facilities for medical help than most other districts.

Literacy and Educational Facilities.

3. According to the 1931 Census 37,994 persons are returned as literate, thus constituting a literacy percentage of more than 21 for the district.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	No. of Institutions.	No. of Pupils.
Primary schools	124	16,273
Secondary (including lower secondary and English teaching) schools.	20	6,952
Commercial, agricultural and industrial schools ..	3	131

Transport Facilities.

4. The close proximity of Bombay City, gives the district the benefits of all the transport facilities available in that City itself. The district is well served by all modern means of communications.

Survey of Resources : Agriculture and Pasture.

5. The district has a total area of 91,016 acres of which 29,071 acres constitute the gross cropped area. Current fallows constitute 18,890 acres. Forests absorb only 2,545 acres while uncultivable waste or land that is not available for cultivation is 25,389 acres. About 15,251 acres

are classified as culturable waste or land which is theoretically available for cultivation. The following table gives details of the classification by crops of the cultivated area for 1937–38 :—

	Area in acres. 1937–38.
Rice	12,608
Cocoanuts	774
Fodder crops	13,215
Fruits and vegetables	2,413
Other miscellaneous crops	61
Total ..	29,071

Fruits and vegetables accounted for 2,413 acres in 1937–38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following information in respect of 1938–39 :—

		Area in acres. 1938–39.
Vegetables		76
Green vegetables		312
Fruits—		
Plantain	11	
Mango	1,923	
Others	78	
.. .. ..		2,012
Total ..		2,400

More than 13,000 acres are under fodder. The details of live-stock in the district according to the Census of cattle taken in 1934–35 are as follows :—

Bulls and Bullocks (breeding, working and young stock)	9,007
Cows (do. do.)	8,143
Buffaloes (do. do.)	1,810
Cow-buffaloes (do. do.)	14,178
Sheep and goats	6,634
Horses and Ponies	518
Donkeys	481

Survey of Resources : Power.

6. The Bombay Suburban Electric Supply Company supplies the district with electricity. It purchases its supply of power from the Tatas. In 1936-37 the total units purchased were about 3·8 millions of which 3·2 million units were sold to the public, the total number of units sold for power purposes being nearly 1·6 millions.

Survey of Resources : Capital.

7. The district being quite close to Bombay City has very good advantages as regards capital resources as it can get all the facilities from the numerous banking establishments in Bombay City.

Industries in the District—General.

8. The population engaged in industrial occupations has been estimated at 21,694 including the 4,381 persons engaged in fishing and salt-making. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Tailors, milliners, etc.	558
Washing and cleaning	667
Barbers, etc.	544
Scavenging	660
Total ..	2,429

The remaining 19,265 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Fishing	3,607
Salt-making	774
Cotton ginning and pressing	339
Cotton spinning, sizing and weaving	6,426
Carpenters, turners, etc.	635
Blacksmiths, etc.	187
Potters and makers of earthenware	330
Manufacture of matches, fireworks, etc.	3,578
Boot and shoe-makers	343
Lime burners, cement workers, etc.	1,072
Other miscellaneous industries	1,974
Total ..	19,265

Of these, no less than 11,082 workers were employed in concerns coming under the Factories Act, during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931	1938	1931	1938
Government and Local Fund ..	2	1	291	129
Textiles	5	8	4,945	5,936
Engineering	3	4	723	151
Minerals and metals	..	1	..	21
Food, drink and tobacco	5	10	171	466
Chemicals, dyes, etc.	11	7	4,233	1,298
Paper and printing	2	2	186	217
Processes regarding wood, stone and glass.	1	14	491	1,042
Processes regarding hides and skins ..	..	1	..	60
Miscellaneous	1	8	42	629
Seasonal factories	..	1	..	49
Total ..	30	57	11,082	9,998

9. The investigator, Mr. S. M. Muzumdar, spent 18 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Fishing Industry.

10. There is a large fishing industry in the suburban district, the chief centres being Danda and Versova. The investigator interviewed some of the fishermen at Versova. Some of the fishermen have their own boats and nets. The boats are worth about Rs. 600 each and the nets about Rs. 200 to Rs. 300. These boats are generally worked by 4 or 5 men. The average earnings of these fishermen are estimated to be about Rs. 25 to Rs. 30 a month. The brisk season lasts from October to March and they find no difficulty in disposing of their catch. The other fishermen who have no boats of their own, depend upon the goodwill of their relatives and friends who own boats for going out to sea. For this help, they have to give a part of their catch to the owner of the

boat. Marketing of the fish is usually done by the fisherwomen. The main demand put forth by the fishermen is for finance at cheap rate of interest, which would enable them to build more boats and purchase more nets.

Hosiery Works.

11. The investigator visited one hosiery works in the district where nearly 50 workers are engaged in preparing knitted underwear and scarves from cotton and woollen yarn. The products are sold mainly within the Province.

The proprietor of the factory complains about the severe competition he is meeting in his trade both from internal and external concerns. It is stated that there are a number of small-scale concerns having little equipment and not subject to the Factory Act. Their competition is very keenly felt. Moreover, in some of these and in some of the factories, female labour is said to be extensively employed and the costs are, therefore, reported to be lower. In addition, Japanese competition is said to be severe. Among the requirements put forth by the owner of this factory may be mentioned : (1) the necessity of abolishing the import duty on woollen yarn, as it is stated that all the protective effects of the present duty on woollen knitted wear is largely nullified by the import duty on yarn, (2) the need for Government patronising the Indian hosiery products and (3) financial help at low rates of interest.

Dyeing and Bleaching.

12. The investigator reports that there are 5 concerns in Chembur engaged in dyeing and bleaching. He visited one of them where about 45 workers are employed. These dyeing and bleaching concerns work on a contract basis. The cloth is supplied by customers and work is carried out according to orders. The concern visited by the investigator, realises about Rs. 26,000 per month from its work. It is stated that the trade is profitable. It is, however, pointed out that there is not much understanding among the different factories and this leads to a competitive reduction in rates. It has been suggested that Government should substantially help this industry by : (1) abolition of the import duties on machinery and (2) by supplying the industry with expert advice on dyeing and bleaching operations.

Rice and Flour Mills.

13. There are a number of rice and flour mills in the district. The investigator visited one rice mill and two flour mills. The equipment of the rice mill is stated to be worth about Rs. 3,500. The owner employs one worker. His average gross income is estimated to be about Rs. 1,000 per year. Of the two flour mills, the owner of one has an equipment worth about Rs. 2,000 and the other, an equipment worth about Rs. 500. The owner of the bigger mill is said to realise about Rs. 60 to Rs. 70 a month, while the other hardly gets Rs. 20 per month.

14. The main difficulty confronting both the rice and flour mills is said to be the severe internal competition. All the persons interviewed stress the urgent necessity for restricting the number of these factories. It is suggested by them that Government themselves should fix grinding and polishing charges at reasonably economic levels. A request has also been made that the high rates of electricity charges in the district should be lowered. Finally, the owners suggest that if they are supplied with capital at low rates of interest, they will be able to start side industries and thus provide additional employment to their workers.

Confectionery Works.

15. There is only one confectionery works in the district producing peppermints, toffees, etc., on a large scale. This concern gives employment to nearly 70 workers and its equipment is said to be worth nearly Rs. 45,000.

16. The factory produces lozenges, peppermints, toffees, etc. As sugar is the most important constituent of the products of the company, the protection granted to the indigenous sugar industry by means of a heavy import duty has, it is stated, adversely affected the profitability of the concern. The proprietors of the factory suggest that the Government of India should direct the Sugar Syndicate to charge lower rates to firms using sugar for industrial purposes. In the alternative, he suggests that Government should give a subsidy to offset the increase in their cost of production due to the higher price of sugar. The finished products of the company are marketed throughout India. The owner points out, however, that severe restrictions are placed by the Cantonment authorities regarding the marketing of their products in their areas. A demand is made for protection against the competition of foreign confectionery and also for lowering the freight charges. Finally, it is suggested that if capital is made available to them at low rates, they can expand their business and also instal up-to-date machinery.

Cigarette Industry.

17. The investigator visited three of the Indian-owned cigarette manufacturing concerns in the district. The average number of workers employed in these factories is about 75. The manufacture of cigarettes in these factories is carried on with the help of power-driven machinery. The tobacco used in these factories is mostly imported from Guntur in the Madras Presidency. It is stated that the whole of the year's requirement of tobacco has to be purchased by them in the months of January to March as after this period no tobacco becomes available to them due to the heavy purchases made both by the foreign-owned factories operating in India and by the exporters. On an average a factory is stated to utilise tobacco worth about a lakh of rupees and the owners complain that a substantial part of their capital is thus locked up in the form of stocks and raw materials. The cigarettes produced by

these factories are reported to be of an inferior quality. They are priced at 10 annas per 100 and sold throughout the country.

18. The main complaint of these factories is not about the competition of foreign imported cigarettes but about the cigarettes manufactured by foreign-owned factories operating in India. Thus it is stated that these foreign-owned companies have a number of factories in India which are equipped with up-to-date machinery and operated by expert tobacconists. Moreover, these companies have their established brands which have a secure market and as the cigarettes manufactured by these concerns in India are, it is alleged, labelled under the name and address of their offices in England, the public gets the impression that these cigarettes are made in England. They are thus more readily marketed than the cigarettes of the Indian concerns. Moreover, these big concerns, it is alleged, are attempting deliberately to stifle the Indian industry by reducing the prices of their established brands and by threatening the cigarette stockists with refusal to supply them with the established brands if they do not stop marketing Indian cigarettes. The factory owners demand that some kind of protection should be given to them against the competition of these foreign-owned companies and also suggest that legislation should be undertaken by which all the cigarette companies could be compelled to designate the country of manufacture both on the packet and on the cigarettes.

19. The other complaints of the cigarette factory owners are about (1) the terminal tax on raw tobacco that is levied by the Bandra Municipality, (2) the heavy electricity charges, (3) the heavy freight charges and (4) the restrictions imposed by the Cantonment authorities about the marketing of Indian cigarettes into their areas. The companies also request Government to appoint an expert tobacco blender for giving them assistance and also to give them loans at low rates of interest.

Cinema Industry.

20. There are a number of motion picture companies working in the Suburban district. Two of these were visited by the investigator. The average number of persons employed in each of these concerns is about 100, including artists. The capital required for running a studio is said to be fairly large. Most of the equipment and other materials are obtained from abroad. A company can produce on an average 3 to 4 pictures in a year. The films are distributed through a distributing agency and have a wide Indian market. The film owners state that the expansion of the industry has been much hampered by the multiplicity of languages in the country.

21. Among the suggestions for the development of the industry are : (1) the necessity for Government assistance in keeping the motion picture industry in India in touch with the latest developments in the technique of motion pictures, (2) the urgent need of finding external markets for Indian films through the good offices of the Indian Trade

Commissioners in different countries, (3) making of educational films with the direct aid and patronage of Government, and (4) the grant of facilities to Indian motion picture companies to make films illustrating the different places of historical interest.

Chemicals.

22. At Ghatkopar the investigator visited a concern which manufactures camphor and gives employment to nearly 10 people. Synthetic camphor is prepared in this concern and it is marketed throughout India. The proprietors feel very keenly the competition of foreign camphor imported from Italy, Japan and Germany; and they suggest that this new Indian industry should be protected either by import duties or by a bounty. A demand is also made for the abolition of the existing import duties on the raw materials utilised in the industry. Finally, it is suggested that finance should be supplied to them at low rates.

Soap Making.

23. The investigator visited a small soap-making concern which works on a very small scale. The equipment consists of a pressing machine, a *bhatti* and a few dyes and is estimated to be worth about Rs. 200. Mostly washing soaps are prepared and are supplied to the local grocery shops. It is stated that the sales are worth about Rs. 150 per month. After paying wages to the three men employed by him, and meeting all other expenses, the owner is estimated to get an income of Rs. 30 per month. The main difficulty is stated to be in regard to the marketing of the products. Further, it is reported that the public are prejudiced against their products while the well-known brands of large factories have an established market. It has been suggested, therefore, that the small soap concerns should receive special consideration at the hands of Government, and that they should be helped by giving them technical advice and finance at cheap rates of interest. Further, Government should themselves purchase soaps from the small concerns for use in Government hospitals.

Fire-works.

24. The investigator visited a factory at Santa Cruz which manufactures fire-works. About 40 workers are employed throughout the year and the factory has an equipment worth about Rs. 20,000. The machinery is mostly German and is worked with electricity. Mostly sparklets are manufactured and the raw materials required are imported from Germany. The sparklets are sold throughout India. Demand is brisk generally during *Divali* and *Ganesh Chaturthi* celebrations. The proprietor of the concern urges that the raw materials and machinery required for his industry should be allowed to be imported without any customs duty. Further, the railway freight charges are reported to be heavy and he suggests that they should be substantially lowered.

He also suggests that the import duty on German sparklets should be increased. He wishes to manufacture crackers, but as he does not know the technical processes, he wants Government to help him in this matter. He also wants Government to supply him with finance at low rates.

The Match Industry.

25. The investigator visited one of the match factories in the district. Here matches are produced both with machinery and by hand. Of the 225 workers employed by the *karkhana* 75 are working in their own cottages. The equipment consists mainly of Japanese and German machinery. The factory gets its supply of wood and chemicals from abroad. It is stated that Indian wood is not suitable for use. The match-boxes are marketed mainly in the Bombay Presidency. The main complaint of the *karkhandar* is about the competition from the foreign owned factories. The *karkhandar* wants Government to give the Indian manufacturers protection against the powerful competition of foreign-owned companies by means of a subsidy or by the application of a quota system. He also wants financial accommodation at cheap rates and a reduction in the freight charges.

Bakelite Products.

26. The investigator visited a factory producing plates, cups, saucers, etc., out of bakelite powder. It gives employment to nearly 40 workers and owns an equipment worth about Rs. 50,000. Every year finished articles worth nearly Rs. 80,000 are produced and marketed throughout India. The demand is said to be slack during the rainy season. The trade is reported to be profitable. There is, however, a good deal of competition both from other factories in India and from imports from Britain, Japan and Germany. The competition in certain lines of production such as bowls, soap-boxes and tumblers is said to be particularly severe. One way of helping the indigenous producers against foreigners is said to be the abolition of the import duty on the raw materials used by them. Further, the owner states that a reduction in the electricity rates charged by the Bombay Suburban Electric Supply Company will considerably reduce his costs of production.

Household Furniture (Iron).

27. The investigator interviewed an employer at Kurla who prepares cots, bed-steads, chairs, etc., from iron and steel. He employs about 7 workers. The articles manufactured are sold locally through the shop of the employer. Demand is said to be brisk in summer. After paying an interest of 7½ per cent. on borrowed capital and meeting all other working expenses, the owner claims to earn an income of Rs. 60 per month. He states that private borrowing is expensive and suggests that finance should be made available to him at low rates by Government. He also stresses the need for making people more furniture minded.

Carts and Wooden Furniture.

28. The investigator interviewed a few carpenters in the district. Some of them are making carts while others are engaged in preparing the ordinary household requirements such as *pats* (low wooden seats), chairs, racks, etc. One of the carpenters interviewed, has two wage-earners under him. He makes carts and purchases every month wood, iron bars, nails, etc., of the value of about Rs. 100. He prepares about 3 carts in a month. The price of a cart varies from Rs. 40 to Rs. 60 according to the wood used and the size of the cart. These carts are made only to meet orders. In addition, repair work, mainly of carts, is undertaken and brings in some extra income per month. The artisan states that cart-making has now ceased to be a remunerative occupation.

29. Another carpenter who was interviewed is engaged in preparing *pats* (wooden seats), chairs, etc., and is assisted in the work by two members of his family. In addition, he occasionally employs a cane worker on contract when chairs with cane seats, etc., are made. His goods are sold locally and are largely made to order. The demand for wooden furniture is said to be brisk between February and May. These artisans want financial help from Government so as to enable them to get better tools and buy wood at wholesale rates. They also suggest that training in improved technique and designs should be given to them and that Government should patronise their products.

Canvas and Rubber Shoes.

30. The investigator visited two factories manufacturing canvas and rubber shoes. One employs 250 workers and the other 90. Most of the raw materials are imported from Japan. The machinery used is also obtained from Japan. The products are sold all over India, in Fiji Islands and in Africa.

31. The owners of these factories suggest that electricity charges levied by the Bombay Suburban Electric Supply Company should be lowered and that Government should obtain the supplies of canvas and rubber shoes required for their police and military departments from the Indian concerns. Both the owners complain about the intensity of the competition they meet with from foreign imports and they assert that this competition has been more intensified with the establishment of foreign-owned large companies in India itself. They request that Government should refuse permission to the starting of foreign-owned companies in India.

Manufacture of *Champals* and Shoes.

32. There are in the district a number of *mochis* preparing *champals* and shoes. The investigator interviewed a few of these independent artisans. They are assisted by their family members in their work.

One of the *mochis* interviewed, prepares only *champals* while another makes both *champals* and shoes as he possesses an old sewing machine worth about Rs. 75 in addition to the ordinary tools of the *mochis'* trade. It is stated that on an average an artisan can prepare only one pair of *champals* in a day and that including the remuneration he obtains from repair work, a *mochi* earns only about Rs. 15 to Rs. 20 a month. The *champals* and shoes are sold locally. Business is slack during the rainy season.

33. The *mochis* complain about the rapidly falling prices of their products which they attribute mainly to the competition of cheap canvas and other factory produced shoes. They suggest that manufacture of such competitive footwear should be stopped. They also complain about the higher price they have to pay for their supply of leather and about the difficulty in obtaining good quality leather. They want to be supplied with finance for purchasing sewing machines and other raw materials required in their industry.

Stone Crushing.

34. There are about 12 concerns in the Bombay Suburban district engaged in taking out stones from quarries. One such concern was visited by the investigator. It employs 25 men and 20 women workers. The stones are taken out of quarries by stone-breakers worked with electricity. The value of the stones taken out of the quarries by this concern is estimated to be nearly Rs. 20,000 per month. All the stones are sold in the city and suburbs of Bombay. Work is suspended during the rainy season. It is stated that it is difficult to get spare parts of the stone breaking machinery and this often results in dislocation of work. The owner, therefore, stresses the urgent need for starting companies in India for the manufacture of such types of machinery. Further, there is stated to be severe internal competition and it is suggested that some kind of mutual understanding about rates should be brought about between the different concerns.

Possibilities of New Industries.

35. The Bombay Suburban district is so closely situated to the City of Bombay that its industrial life is inter-linked with that of the City itself. Most of the factories in this district have their head offices in Bombay City. The Bombay Suburban district offers good scope for the establishment of many large-scale and small-scale industries as these can have all the advantages of the numerous industrial facilities available in such an advanced City like Bombay. Secondly, it is also an ideal place for such large-scale industries like oil-refineries, chemical industries, engineering and machinery industries, leather industries, etc., which require large open spaces for the establishment of factories.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

BROACH AND PANCH MAHALS

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

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regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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BROACH AND PANCH MAHALS.

Position and Area.

The district of Broach and Panch Mahals is a combination of two entirely different divisions, which have been grouped together for purposes of administration. The division of Broach lies between 21° 25′ and 22° 15′ north latitude and 72° 31′ and 73° 10′ east longitude and measures 1,468 square miles. Its boundary on the north is the Mahi river, on the east and south-east are the Baroda and the Rajpipla States, respectively, and on the south lies the Kim river. The Panch Mahals division lies between 22° 15′ and 23° 11′ north latitude and 73° 22′ and 74° 29′ east longitude. It measures 1,608 square miles, and consists of two sections, separated by the Baria State of the Rewa Kantha Agency.

Physical Features.

2. The Broach division consists of an alluvial plain of 54 miles in length. Its breadth varies from 20 to 40 miles. The important rivers of the division are the Mahi, the Kim, the Dhadhar and the Narbada. The Narbada has a course of 50 miles in this division. The rivers are of no great use for irrigation on account of their high banks.

The western section of the Panch Mahals division is flat and well wooded, while the eastern section is rugged and bare. Though there are many streams and water courses, Mahi is the only big river in this division.

Climate and Rainfall.

3. Broach has a pleasant climate. The hottest months are March and April. In the cold season, crops are sometimes destroyed by frost. The average rainfall is 40 inches.

In the Panch Mahals division the climate shows wide variations; Kalol in the west and Dohad in the east appear to be less free from diseases than other places. Godhra which is surrounded by large areas of forests and waste lands has a trying climate. The average rainfall in this division is about 39 inches. July and August are the wettest months and there is usually little rain after September.

Population.

4. The total population of the district is 788,696 (334,170 in the Broach division and 454,526 in the Panch Mahals division). The distribution of this population into rural and urban, is as follows :—

	Number of villages.	Total rural population.	Number of towns.	Total urban population.
Broach division ..	403	265,290	5	68,880
Panch Mahals division ..	648	381,708	5	72,818
Total ..	1,051	646,998	10	141,698

Of the 10 towns in the whole district, the important towns are :—

	Population.
Broach division—	
Broach	34,276
Ankleshwar	12,025
Jambusar	11,734
Panch Mahals division—	
Godhra	35,110
Dohad	22,093

The proportion of the urban population to the total population in the district is about 18 per cent. Corresponding figures for the two divisions separately are 20·6 for Broach and 16·1 for Panch Mahals.

According to the Census of 1931 the total number of principal workers in the district is 231,082 of whom 190,453 are males. The occupational distribution of the population is as follows :—

——	Broach division.	Panch Mahals division.	Total.
Exploitation of animals and vegetation ..	67,752	100,220	167,972
Exploitation of minerals	63	996	1,059
Industry	9,464	7,362	16,826
Transport	2,071	2,533	4,604
Trade	4,789	5,463	10,252
Public force and Administration ..	2,746	1,896	4,642
Professions and Liberal Arts	2,412	1,754	4,166
Living on their income	966	873	1,839
Domestic service	2,202	1,473	3,675
Insufficiently described	10,296	4,546	14,842
Unproductive	652	553	1,205
Total ..	103,413	127,669	231,082

The proportion of the industrially occupied persons to the total principal workers is only about 7 per cent. for the whole district or about 9 per cent. for the Broach division and 5 per cent. for the Panch Mahals division. The Broach division is thus more industrialised than the Panch Mahals division. Though according to the Census

classification 16,826 persons in the district are engaged in industries proper, some of the persons shown against "exploitation of animals and vegetation" and "exploitation of minerals" are engaged in such industrial occupations like forest industries, stock-raising, fishing and exploitation of manganese. These number 3,818 as shown below:—

Forestry	272
Stock-raising	2,053
Fishing, etc.	577
Exploitation of manganese	916
Total ..	3,818

Adding these, the number of total principal workers engaged in industrial occupations comes to 20,644.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. In the Broach division the mean ratio of births per thousand for the five years ending 1937 was 47·79 and the mean ratio of deaths per thousand was 30·49, thus yielding a survival rate of 17·3 per thousand. Corresponding figures for the same period in the Panch Mahals division were 36·96 births per thousand, 23·0 deaths per thousand and 13·96 survivals per thousand. Health conditions thus seem better in the Broach division.

There are two hospitals, fifteen dispensaries, a child welfare centre and a leprosy clinic in the Broach division. Of the two hospitals, one is a zenana hospital maintained by a mission. Both the hospitals, the child welfare centre and the leprosy clinic are in the Broach town while of the fifteen dispensaries, four are in the Broach town and the remaining in the different talukas. Nine dispensaries are maintained by the District Local Board, five by the municipalities and one by the B. B. & C. I. Railway. In the Broach town itself there are 21 doctors while the total number of doctors in the whole of Broach division is 52. In the Panch Mahals division there are 28 doctors of which 11 are in Godhra town. There is only one hospital at Godhra, which is maintained by Government. Of the ten dispensaries in this division, 7 are maintained by the District Local Board, one by a mission, one by the Red Cross Society and one by the B. B. & C. I. Railway. The Panch Mahals division is much backward from the point of view of medical facilities. The number of persons per doctor in this division excluding Godhra town, comes to 24,966 against 9,375 for the Broach division excluding Broach town.

Literacy and Educational Facilities.

6. According to the 1931 Census returns 61,896 persons are returned as literates in the Broach division and 33,511 persons in the

Panch Mahals division. The percentage of literacy is thus higher in the Broach division (18·5 per cent.) than in the Panch Mahals division (7·3 per cent.).

The educational facilities in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.			Number of Pupils.		
	Broach division.	Panch Mahals division.	Total.	Broach division.	Panch Mahals division.	Total.
Primary Schools ..	344	290	634	28,649	22,669	51,318
Secondary (including lower secondary, English teaching) Schools ..	21	9	30	2,748	1,819	4,567
Industrial, commercial and agricultural Schools ..	4	..	4	147	..	147

Of the 403 villages in the Broach division 260 had schools in them, while of the 648 villages in the Panch Mahals division only 169 had schools in them.

Transport Facilities.

7. The port of Broach affords good facilities for communications. The railways in this division are the B. B. & C. I. Railway and the Broach-Jambusar Railway. The latter serves the Amod and Jambusar talukas. Hansot-Sahol, Ankleshwar-Hansot, Borbhata-Ankleshwar and Jambusar-Broach are some of the important roads in this division. The Panch Mahals division is well served by railways. The main line of the B. B. & C. I. Railway runs from west to east and connects this division with Northern and Central India. There is also a chord line between Godhra and Baroda. Besides these, there are four branch lines which link up the important towns in the neighbourhood. The main roads are: (1) the road traversing from Lunavada to Jambughoda frontier, (2) the Jhalod-Limkheda Road and (3) the Anand-Dohad road. The total mileage of roads maintained by Government and local authorities in the whole district is 280 miles of metalled roads and 230 miles of unmetalled roads.

Survey of Resources : Agriculture and Pasture.

8. The district as a whole, has a total area of 1,968,532 acres of which 1,272,331 acres constitute the gross cropped area : Current fallows constitute 100,486 acres. Forests absorb 202,022 acres while other land not available for cultivation is 364,067 acres. There are 104,891 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area for the year 1937–38 :—

	1937–38 Area in acres.
Rice	101,073
Wheat	73,746
Barley	2,060
Jowari	121,230
Bajri	32,346
Ragi	17,112
Maize	108,329
Gram	50,932
Other food grains including pulses	148,965
Sesame (*til*)	27,758
Groundnut	90,457
Castor seed	4,835
Other oil-seeds	2,429
Condiments and spices	2,741
Sugarcane and other sugars	597
Cotton	350,165
Other fibres	4,388
Tobacco	3,513
Fodder	124,034
Fruits and vegetables	4,080
Other miscellaneous crops	541
Total ..	1,271,331

It will be noticed that the most important crop of the district is cotton which accounts for a considerable portion of the cropped area. The other important commercial crop is groundnut.

Fruits and vegetables accounted for an area of 4,080 acres in 1937–38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following information

in respect of 1938–39, in which year the area under fruits and vegetables was 4,785 acres :—

	Acres.
Vegetables—	
Sweet potatoes	82
Yam	71
Radish	36
Onions	330
Others	90
	609
Green vegetables—	
Tomato	68
Fenugreek	59
Musk Melon	304
Others	2,629
Total ..	3,060
Fruits—	
Plantain	81
Mango	401
Lime	7
Sweet lime	66
Guava	387
Papaya	120
Others	54
	1,116
Total, Fruits and Vegetables ..	4,785

The area under fodder was 124,034 acres in 1937–38. Most of this area is in the Panch Mahals division where fodder of fair quality is abundant and there are extensive grazing grounds. The Broach division is comparatively poor in fodder though a fair quantity of fodder is found on the riverside portion of the Ankleshwar taluka. There are few professional breeders in the district but cultivators keep

a good number of cattle. According to the Census of cattle taken in 1934–35, the details of live-stock in the district are as follows :—

Bulls and Bullocks	(working, breeding and young stock).			251,060
Cows	(do.	do.	)	147,250
Buffaloes	(do.	do.	)	18,696
Cow-buffaloes	(do.	do.	)	544,636
Sheep and goats ..	..	..	..	118,279
Horses and ponies..	..	..	..	7,284
Donkeys ..	..	..	..	4,827
Camels ..	..	..	..	418

Of these, milch cattle number 162,310 consisting of 85,476 cows and 76,834 cow-buffaloes.

SURVEY OF RESOURCES : MINERALS.

9. A conglomerate of stone and lime-stone in the Ankleshwar taluka is the only important mineral available in the Broach division. The Panch Mahals division is rich in minerals. The hills therein are reported to contain iron, lead, manganese and mica. Iron ore is found in the village of Palanpur and also near Jambughoda and Shivrajpur. Manganese is mined in the Halol Mahal. Good paving stone is found at Bajarwada. A granite of lasting quality is reported to be found in the neighbourhood of the Pali station.

SURVEY OF RESOURCES : FORESTS.

10. Except for a small tract the division of Broach has no forests. *Babul* and the palmyra palm are the only important trees. The Panch Mahals, however, has a larger area under forests, and timber, firewood, and *mhowra* flowers are exported to other districts. *Timru* leaves, *tarwad* bark and *ghatbor* fruits are also available. The income from the forests of the Panch Mahals division as given in the Forest Department Report for 1937–38 is shown below :—

	Rs.
Timber	1,90,885
Firewood and charcoal	1,170
Bamboos	482
Grazing and fodder grass	19,895
Other minor produce	7,551
Total ..	2,19,983

Survey of Resources: Power.

11. There are 3 electric supply companies in the district. The figures of their output are given below:—

Name.	Units generated (000s).	Total No. of units sold. (000s).	No. of units sold for power purposes (000s).
The Broach Electric Supply Corporation ..	744	585	234
The Godhra Electric Company Limited ..	803	615	443
The Dohad Electric Supply Company, Ltd. (recently started)	35 (during six months).	30	21

Survey of Resources: Capital.

12. The Imperial Bank of India has two branches in this district, one at Broach and the other at Godhra. In the Broach division there were 163 agricultural Co-operative Societies in 1937–38, with a working capital of Rs. 12·89 lakhs and 27 non-agricultural co-operative societies with a working capital of Rs. 10·73 lakhs. The agricultural co-operative societies in the Panch Mahals division numbered 185 during the same year and their working capital amounted to Rs. 5·25 lakhs, while the non-agricultural co-operative societies were 23 in number and their total working capital was Rs. 7·81 lakhs. The Broach District Central Co-operative Bank had a working capital of Rs. 24·02 lakhs at the end of 1937–38. Besides, there were 70 postal savings banks in the whole of the district with 13,067 accounts current in 1937–38, the total amount of balance to their credit being Rs. 40·3 lakhs. In the same year cash certificates worth about Rs. 11·8 lakhs were sold in the district.

Industries in the District—General.

13. The population engaged in industrial occupations has already been estimated at 20,644 including the 3,818 persons engaged in forestry, stock-raising, fishing and exploitation of manganese. Of these, the following classes of industrial workers are more or less

uppliers of pure services and cannot be classed under makers of manufactured commodities :—

	Broach division.	Panch Mahals division.	Total.
Butchers	134	154	288
Tailors, milliners, etc.	679	510	1,189
Washing and cleaning	242	225	467
Barbers, hair-dressers	620	653	1,273
Scavenging	205	597	802
Total ..	1,880	2,139	4,019

The remaining 16,625 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

	Broach division.	Panch Mahals division.	Total.
Forest Industries	36	236	272
Stock-raising	825	1,228	2,053
Fishing	558	19	577
Exploitation of manganese	....	916	916
Cotton ginning, cleaning, etc.	1,750	538	2,288
Cotton spinning and weaving	1,262	237	1,499
Working in leather	285	237	522
Carpenters, turners, etc.	911	797	1,708
Basket makers, etc.	42	425	467
Blacksmiths and other workers in iron ..	259	429	688
Potters and makers of earthenware ..	604	898	1,502
Manufacture and refining of vegetable oils ..	427	244	671
Sweetmeat and condiment makers ..	158	179	337
Boot, shoe, etc., makers	252	122	374
Lime burners, etc.	637	315	952
Makers of jewellery and ornaments ..	482	363	845
Other miscellaneous industries	515	439	954
Total ..	9,003	7,622	16,625

Of these, no less than 8,445 workers were employed in concerns coming under the Factories Act during the Census year, 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	4	3	2,861	2,206
Engineering	2	4	1,080	1,802
Food, drink and tobacco ..	2	6	27	77
Chemicals, dyes, etc. ..	3	18	96	604
Processes *re* : wood, stone and glass	....	2	....	140
Processes *re* : hides and skins..	....	2	....	67
Seasonal factories	49	52	4,381	5,308
Total ..	60	87	8,445	10,204

14. The investigator, Mr. A. B. Trivedi, spent about a month and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. Broach, Tralsa and Katwara are some of the important centres of handloom weaving in this district. According to the reports received by the investigator, the number of handlooms at these centres has gone down considerably in recent years. The investigator interviewed an independent artisan at Broach and a Tralsa weaver. Both of them work on fly-shuttle looms. The Broach artisan uses 20½s yarn for *sarees* and 10½s yarn for *ghagrapat* (women's wear). The Tralsa weaver generally uses 6s and 10s yarn and weaves coating, shirting and coarse cloth. His products are locally marketed. After paying the two boys engaged in the preparatory processes about Rs. 4 each per month, he gets about Rs. 15 per month for himself.

Blankets.-Gadarias about 40 families engaged in weaving blankets. Only 2 women working at present. All the males go to local mills. Other women do miscellaneous labour. The wool is bought from shepherds. Price of the wool depends on the number of merchants active at the time in buying wool in sending to Bombay. Price varies from Rs. 8 to Rs. 18 in a maund. The wool is cleaned with a bow, and spun on a charkha. This weaving is done on a small loom about 2 1/2 ft. wide and 7 ft. long. The blanket woven is very rough. It is used mostly by Bharvads and Machhis. One piece 7 ft. x 2½ ft. cost Rs. 1-4-0. About 16 such pieces can be made out of a maund of wool. The average earning for blanket made out of a maund of ℥ wool is Rs. 8. Period taken by one person in using one maund of wool is a month. Average earning per day comes to about four annas.

Sujjani.- Only three workers in Broach. There have never been a greater number at any time. Two workers are required to work at each loom. Sujjanis or quilts with chest board pattern-different colours being used. Silk-yarn is used and fine cotton is stuffed under alternate squares by hand. Demand at present is very slack. The Bombay Swadeshi Co-operative Stores is buying about 100 of these a year. The quilts are 6 ft. x 8 ft. and cost from Rs. 15 to Rs. 60 according to the materials used. The gross profit realised from each quilt varies from Rs. 6 to Rs. 18/-.Cost of silk yarn is said to be Rs. 20/- per lb. This requires verification. It takes from 5 to 8 days to manufacture one Sujjani. Thus the average earning per worker per day is from eight annas to a rupee. Looking to the extremely restricted market for this

kind

16. The investigator reports that Katwara weavers use the yarn from the cut warps obtained from Ahmedabad mills. The net income of a Katwara weaver's family is estimated at Rs. 7-8-0 per month.

17. All the artisans interviewed complained about competition from mills and powerlooms. They want that Government should prohibit mills from producing coarse cloth and also that they should be given finance to purchase raw materials. Some of them want Government to market their goods at remunerative prices. The investigator reports that due to poor demand for their products most of the weavers work as agricultural labourers during the rainy season.

Sujjani Weaving.

18. Broach is famous for its *Sujjanis* from ancient times. Under the patronage of rajahs and maharajahs *sujjanis* of cotton and silk worth even about Rs. 150 each were prepared at this centre. But the industry is now no longer in a flourishing condition and it is reported that there are only three families of artisans engaged in this industry at Broach.

The investigator interviewed two *sujjani* weavers. Both of them had looms worth about Rs. 100 each. Both the purchase of the raw materials and the sale of the finished product are restricted to the local market. One of the artisans gets an income of about Rs. 30 per month while the other gets about Rs. 15 per month.

19. Both the artisans complain about the narrowing of their markets. The imports of cheap rugs and blankets from Japan has seriously curtailed their sales. They urge that Government should urgently do something to remove this competition, and further, should give wide publicity to their products. They are sure that if Government takes some interest in them and is prepared to market their goods outside, there will be ready sales. The investigator reports that the old-fashioned looms of these weavers need urgent improvements.

Rajjai Making.

20. *Rajjais* are quilts which are used as bed covers, blankets and also as mattresses. Formerly there were many *rajjai* makers at Broach and their products were well-known throughout Gujarat. The industry has now fallen on evil days and almost all the families have taken to carding as their principal occupation. There is still some demand for *rajjais* during the marriage and cold seasons. The market for the product is Surat, Daman, Ahmedabad and the Deccan. The investigator interviewed one independent worker in this industry. He was told that for preparing a *rajjai* ($2\frac{1}{2}$ yards $\times$ $1\frac{1}{2}$ yards) 3 lbs. of raw cotton, 5 yards of ordinary cloth and 5 yards of fancy cloth are required. The work

is partly done with a sewing machine but mainly by hand by the women-folk of his family. An ordinary *rajjai* costs about Rs. 3-15-0 and fetches about Rs. 5. About 3 days are taken by his family to prepare one *rajjai*. As about 10 *rajjais* are prepared per month, his monthly income from this source seems to be about Rs. 10. Apart from it, his carding work brings him about Rs. 15. Thus the whole family income is about Rs. 25 per month.

Blanket Weaving.

21. Blanket weaving is carried on at Broach, Dohad, Limdi and Zalod. The industry has declined considerably. At Broach the number of families engaged in this industry is reported to be only about 5 or 6. At other centres also their number has very much declined. The investigator interviewed two artisans at Dohad. The cost of their old-fashioned looms is about Rs. 5 each. For a blanket ($2\frac{1}{2}$ yards $\times$ 1 yard) about $4\frac{1}{2}$ seers of wool are required. Its price is reported to be 9 annas and colouring requires an additional Re. 0-1-3. Spinning takes about 2 days and weaving one day, and the finished product brings about Re. 1. Their average income on this basis seems to come to Rs. 5 only per month. The condition of these wool weavers is reported to be pitiable. This is said to be mainly due to the imports of foreign and mill-made rugs and blankets. A blanket which to-day hardly fetches Re. 1 to Rs. 1-8-0 used to fetch about Rs. 3, a few years back. The artisans want Government to prohibit the imports of rugs and soft blanket in their district.

Hemp Carpet Weaving.

22. Hemp carpets or *tats* are made at Katwara, and Chandwar in the Panch Mahals division. It is reported that there are at present only two weavers who are actively engaged in this industry at Katwara and about 10 at Chandwar. The investigator interviewed an artisan at Chandwar. According to the details supplied by him the raw material, hemp, is purchased at Rs. 2 for 32 seers. During cleaning, about 8 seers are lost as waste. A family requires about 3 days to prepare 3 strips of carpets, 9 yards $\times$ 8″ each. These narrow strips are stitched together and the complete carpet is locally sold for Rs. 2-10-0. A whole family thus earns about 10 annas on each carpet. But there is no regular demand even for these low-priced carpets. It is stated that due to the very poor return from their industry, many carpet weavers have left their native places to seek better prospects elsewhere.

There are also a few people in this tract who prepare ropes from hemp. They get about 2 annas for working 10 hours. The investigator reports that these people hardly get sufficient food to eat. It is urged that these old fashioned weavers should be taught the art of preparing better type of carpets, as also mattings and gunny bags.

kind of quilt it does not seem desirable to teach craft to other persons.

Handloom weavers.- There are about 150 Khatri weavers at Broach. They are Hindus. Only women do the work. They weave coloured Saris and petti-coat cloth. There are 3 or 4 merchants who do the actual buying and selling. The weavers are paid only piece-work wages. The merchants get the yarn made into warps 39 yards in length from Ahmedabad. The yarn is then dyed in required colours on payment of wages. The coloured yarn is supplied to the weavers. The merchants send the saris and petticoat cloth to Surat District, where there is demand for such cloth. The price of the sari used to be a rupee. Now it is Rs. 1-8-0. Only low caste people use it. At the present prices about 14 annas worth of yarn goes into each sari and about a 7 annas is paid to the weaver. Margin of profit is little. The whole group of weavers produce about 3000 saris and petticoat cloth pieces in a month. Each weaver gets about Rs. 10 a month. As long as the monthly earnings remain only Rs. 10, there willbe no attraction for others to join. There is good demand for the cloth and stocks at present are low.

Rajais.- About 7 Musalman families are engaged in this business. Only two of them undertake sales. The others sell through them. The Rajais prepared are very ordinary and are at present consumed locally. As such rajais are prepared in every town, there is no scope for enlarging this industry.

Dal OR PULSE-SPLITTING

23. The investigator interviewed two *karkhandars* engaged in this industry, one at Godhra and the other at Ankleshwar. He also interviewed at Jambusar an artisan who is engaged in *dal*-splitting without machinery. The Godhra *karkhandar*, who has also a paddy-husking machine, employs about 14 to 15 men according to the pressure of work. His equipment consists of a pulse splitter, paddy husker and a crude oil engine. His net income from *tur-dal* splitting and paddy husking was reported to be about Rs. 1,500 in 1937-38. The Ankleshwar *karkhandar* employs 2 permanent wage-earners. He purchases *tur* from the Umreth and Godhra agriculturists. His net income is stated to be about Rs. 500 a year. Both these *karkhandars* complain against the imports of *dal* from Godhra where labour is said to be cheap.

24. At Jambusar there are reported to be about 35 families engaged in splitting *dal* by hand. The investigator interviewed one of these workers. He prepares *tur-dal* worth about Rs. 2,000 a year while his own earnings are about Rs. 380. The split *dal* is marketed locally. These workers complain about the import of cheap polished machine-split *dal* from Godhra, Broach and other places which has almost killed their age-long industry.

OIL-SEEDS CRUSHING.

25. The investigator interviewed some artisans engaged in oil-seeds crushing by the *ghani* method at Amod and at Jambusar. One of the artisans interviewed at Amod owns two *ghanis* worth about Rs. 50 each and a pair of bullocks. He buys oil-seeds locally and also undertakes work for others who bring oil-seeds for crushing. The oil and cake produced by him are marketed locally and after paying all expenses he gets an income of about Rs. 225 per annum. The artisan at Jambusar crushes sesame seed. He also crushes oil-seeds brought to his *ghani* by customers. The cake and oil are marketed locally and his income is estimated to be about Rs. 120 a year.

26. The *ghani* owners complain about the uneconomic nature of their industry due to imports of cheap machine-crushed oil. They suggest that Government should heavily tax mill-oil, which according to them is not good for health. They also request that they should be provided with better type *ghanis* with higher extraction power.

FURNITURE-MAKING, CART-MAKING, ETC.

27. The investigator interviewed two artisans engaged in making furniture, etc., at Godhra. One of them who is a *karkhandar*, has 8 wage-earners under him. With the help of tools and appliances worth about Rs. 450 he prepares cradles, cots, etc., and sells them through his agents locally and at Ahmedabad, Nadiad and other places. He earns

about Rs. 1,000 a year. The other artisan interviewed is an independent worker. He is helped by his brother. Both he and his brother together earn about Rs. 200 a year. Due to insufficient income the artisans take to agricultural labour during the rainy season.

28. The investigator also interviewed a carpenter of Kalol who was making carts. At one time Kalol was a famous centre of cart manufacture. People from Baroda, Godhra, etc., used to come to this centre for carts. The artisan interviewed, stated that some years back he was preparing 15 to 20 carts per annum. But now there is no demand for carts and cart manufacture has ceased to be a paying industry. It was suggested to the investigator that the carpenters in the locality should be encouraged to prepare chess boards, carrom boards, jewellery boxes, articles of furniture, etc., so as to improve their economic condition.

Tanning.

29. Tanning is carried on at Godhra and Halol in the Panch Mahals division and Ankleshwar in the Broach division. At Godhra there are reported to be 13 tanneries giving employment to about 120 wage-earners while at Halol and Ankleshwar there are 22 and 25 families respectively engaged in this industry. The investigator interviewed the owner of a tannery at Godhra. He employs about 20 workers throughout the year on a piece-rate basis. His equipment is worth about Rs. 900. Last year he used about 810 maunds of cow hides and 270 maunds of buffalo hides at a total cost of about Rs. 7,500. The other raw materials of the industry such as *turwad* bark, *harda*, lime, etc., cost him an additional Rs. 6,000. Most of these raw-materials are generally purchased locally but at times raw hides have to be imported from Madras. The tanned hides are sorted according to quality and the best ones are exported to Bombay. Others are sent to Surat and also used locally. The total proceeds last year came to about Rs. 17,000 and after paying all expenses the *karkhandar* got a net gain of Rs. 1,200. The investigator was told by the *karkhandar* that about 10 years back, he used to supply a greater part of his tanned hides to a local washers-manufacturing concern. But now such concerns import foreign, especially American, materials. Consequently the tanning business is much affected.

30. The investigator reports that due to insufficient capital resources and inability to market their goods with profit, most of the independent artisans in the district have joined tanneries as wage-earners. They work for 8 to 10 hours a day and get about Rs. 5 per month. There are, however, a few artisans left. Some of them were interviewed at Halol and Ankleshwar. At both these places, the tanners tan the hides by the bag method. For finishing a hide they require nearly 5 days. The average cost of their equipment is about Rs. 50. The artisan interviewed at Ankleshwar, tans about 5 raw hides per month with the help of three other members of his family. For finishing these, he uses 5 maunds

Hand-loom weavers at Ankleshwar.- Ther
ries each engaging from 20 to 30 weavers.
on handlooms of the roller type. Monthly wa
12. The proprietors of the factories have
at Ankleshwar and mostly dispose of their
yarn is bought from Ahmedabad.

of *babul* bark, ½ maund of lime and 2½ seers of fresh oil. The cost comes to about Rs. 23 and the tanned hides are sold locally for Rs. 32. Thus his whole family earns Rs. 9 per month. The condition of the Halol tanners is not much different.

31. The independent artisans bitterly complain about the loss of their markets. Formerly the washers-manufacturing firms used to buy their tanned hides but on the plea that they use excessive salt the owners of washers-manufacturing firms do not buy their products now. The artisans state that if they are given a guarantee that their products will be readily taken up they are prepared to give up the use of salt altogether. Their market has been still more narrowed by the imports of rubber and canvas shoes in the district. A direct consequence of all this, has been both a reduction in the number of hides finished and a lowering of their prices. They want Government to persuade the washer-manufacturing concerns to use the hides tanned locally and impose some restriction on the imports of rubber and canvas shoes. Lastly, they want Government to allow them to collect free of charge, tanning materials like *ghatbor* fruits, *babul* barks, etc., from the forests.

Shoe-Making.

32. The investigator interviewed a few shoe-makers at Ankleshwar and Halol. He reports that at the former place there are about 25 shops of *mochis* giving employment to about 60 artisans while at Halol there are 5 artisans who are engaged in shoe-making. The artisan interviewed at Ankleshwar, is assisted by his brother, son and sometimes by his wife. He imports from Bombay willow calf leather while *deshi* leather, nails, laces and thread are purchased locally. According to the details supplied by him, his yearly expenditure on raw materials comes to about Rs. 317 and the finished product brings him nearly Rs. 540. Thus his whole family gets about Rs. 18 per mensem. The earnings of the other *mochis* at Ankleshwar and of the *mochis* at Halol are more or less the same. Like the tanners, these artisans are also affected adversely by the increased imports of machine-made goods. They request Government to stop the imports of the foreign leather products in their localities. They also want Government to start a tannery where patent and willow calf leather can be prepared. It is asserted that this will be a great help to them.

Washers-Manufacture.

33. The investigator visited both the *karkhandars* who are manufacturing washers at Broach. One of them employs 20 families of *mochis* and the other nearly 40 families. Almost all the *mochis* are engaged on a piece-rate basis and receive a rupee for preparing 32 washers. The one or two cutters employed are paid about a rupee for cutting 400 washers.

34. The equipment of a *karkhana* is worth about Rs. 3,500 and consists of 2 sewing machines, a press, a cutter, dies, blocks of wood and wire for packing. The raw material of the industry consists mainly of chrome tanned splits imported from America. Apart from chrome splits, thread and paste are also necessary. The products are washers and a few leather straps. The washers are mostly sent to the Central Provinces and Khandesh ginning factories. The brisk time for demand is from November to March. The annual output of the smaller *karkhandar* is estimated to be worth about Rs. 17,000 and of the other about Rs. 55,000. It is stated that after paying all charges they get annually about Rs. 1,200 and Rs. 2,500 respectively.

35. Both the *karkhandars* complain against the competition from Madras tanneries. It is stated that even the Broach ginning factories prefer Madras products which can be had at low prices. The Madras manufacturers are able to sell their products cheap because they are able to make direct purchases of splits in much larger quantities from America. The *karkhandars* want Government to encourage the production of chrome leather in their locality which will also make possible the development of a glue industry as a subsidiary industry. They suggest that the owners of local ginning factories and presses should be persuaded to go in for Broach products only and add that financial assistance at low rates of interest will also be an encouragement to the industry.

Soap-Making.

36. The investigator interviewed the *karkhandars* of soap-making concerns at Godhra and at Dohad. The Godhra *karkhandar* employs about 16 wage-earners and the number sometimes goes to 22 when the business is brisk. His equipment consists of a few iron pans and implements for stamping, cutting, etc., and is said to be worth about Rs. 800. He prepares 3 *bhattis* a day. The cost of the raw materials per *bhatti* for preparing washing soaps is estimated at Rs. 42. The *karkhandar* gets about Rs. 1,800 per annum. The washing soaps are mostly exported to Bombay and are also sold to dealers at Ahmedabad, Broach, etc. The prices of the soaps vary according to their quality. The *karkhandar* stated that he used to prepare soaps worth about Rs. 30,000 a year some years back. But due to severe competition his business is now very much restricted. He wants the railways to reduce their freight charges so that he can with advantage import caustic soda, cocoanut oil, etc., needed for the production of toilet soaps. He has the apparatus needed for toilet soap-making and wants this encouragement.

37. The Dohad *karkhandar* also complains about the competition of organised soap-manufacturing factories. 10 years back Dohad is said to have manufactured soaps worth about Rs. 10,000; to-day the production is worth about Rs. 5,000.

Basket Making.

38. The investigator interviewed some of the basket makers at Jambusar and at Ankleshwar. These artisans belong to the sweepers' class and their main occupation is scavenging. At both the places, workers purchase bamboos from the local dealers. At Jambusar 5 to 6 bamboos can be had for a rupee, whereas at Ankleshwar a rupee fetches about 8 to 10 bamboos. The products are sold locally.

39. The artisans complain about the fall in demand for their products. They point out that articles of tin and iron have displaced their bamboo products. Again, bamboo workers from Rajpipla, who get cheap bamboos, and other adjoining villages come to their localities and capture a part of their market. The result has been a big fall in the prices of their products. Baskets, which a few years ago fetched 2 annas each, cannot now be sold even for 9 pies each. The artisans want that Government should themselves use and persuade the District Local Boards and Municipalities to use their articles for carrying road-metal, etc. Further they request that bamboos should be given to them at cheaper rates. They point out that if they are to subsist their industry should at least yield them Rs. 15 a month which it does not at present.

40. The investigator reports that basket making is also carried on at several other places in the district. It is estimated that there are about 300 families of basket makers in the whole of the district. Their condition elsewhere is much the same as at Jambusar and Ankleshwar.

The Exploitation of Manganese.

41. Manganese is exploited by a Syndicate by the open cast and underground mining methods at Shivrajpur and Bamankuva, in the Halol *mahal* of the Panch Mahals division. About 2,400 persons are employed at these two places throughout the year. The total quantity of manganese mined during 1937-38 was stated to be about 54,000 tons valued at about Rs. 4,86,000. The product is marketed in the United Kingdom and the Continent of Europe. The Syndicate reports that it has to face the competition of African and Russian production. It pays a royalty to the Thakore of Shivrajpur.

Lime Kilns.

42. According to the investigator there are about 9 lime kilns at Broach. He interviewed one of the owners of these lime kilns. He works by himself but during the busy season sometimes he employs 2 or 3 labourers for breaking the lime stones and preparing the lime for the market. For such work Rs. 4 per *bhatti* are paid. His *bhatti* and other appliances are worth about Rs. 50. After paying all the expenses his net income comes to about Rs. 25 per month. The lime kiln owner states that the increasing use of cement has considerably affected his industry.

Possibilities of New Industries.

43. The Broach division contains very little forest or mineral wealth. As regards the Panch Mahals division, the Gazetteer states that the hills therein contain iron, lead and mica. It is however necessary to make detailed and scientific investigations into the possibilities of exploiting these minerals. The district as a whole has considerable area under oil-seeds and it should be possible to crush these locally and develop a vegetable oil industry. The leather washers manufacturers at Broach are of opinion that chrome tanning industry can be developed at that place and that it would make possible the manufacture of glue as a subsidiary industry. The possibilities regarding these seem worth further investigation. Among other possible industries which may be mentioned are the manufactures of buttons from *Akik* stones, starch from jowar and of medicines from the herbs and other materials available in the forests. Cigarette making and manufacture of salt have also been suggested as possible new industries.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

DHARWAR

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PREFATORY NOTE

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the

experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,
Chairman.

May 3, 1940.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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DHARWAR.

Position and Area.

The district of Dharwar lies between 14° 17′ and 15° 53′ north latitude and 74° 43′ and 76° 2′ east longitude and covers an area of 4,606 square miles. It is bounded on the north by the districts of Bijapur and Belgaum and the Indian State of Ramdurg ; on the east by the Nizam's Dominions and the Tungbhadra river which separates Dharwar from the Bellary district of the Madras Province ; on the south by the Mysore territory ; and on the west by the district of Kanara. Its greatest length from north to south is 116 miles and its greatest breadth is 77 miles.

Physical Features.

2. The district can be divided into three regions. In the north-east comes the Desh, an open plain country made up of the Ron, Navalgund and Gadag talukas and covering a little more than one-third of the district. This area is most liable to recurrence of drought. In the west is the Mallad with rich pasture lands and good facilities for the storage of water, with nearly as much area as the Desh. Between the Desh and the Mallad lies a transition tract covering about twelve hundred square miles. Its soil is a reddish alluvial clay, crossed here and there with belts of cotton soil of great richness. There are no large rivers in the district. Of the seven principal streams, six run eastwards and one to the Arabian Sea.

Climate and Rainfall.

3. In the elevated tract lying between the treeless plain in the east and the rice lands which border on the western forests, the climate is both pleasant and healthy. Further west it is decidedly unhealthy in the cold weather while in the east the climate is generally dry and healthy. The rainy season lasts from June to December. Its long duration is due to the fact that the district gets the benefit of the rain of both south-west and north-east monsoon winds. The average rainfall in the district is about 33 inches.

Population.

4. The district has a population of 1,102,677 of whom 820,314 live in rural areas, consisting of 1,279 villages while the remaining 282,363 are found in 17 towns. The more important towns are :—

Hubli	89,982
Gadag (Bettigiri)	45,852
Dharwar	41,671

The proportion of the urban population to the total population comes to 25·5 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 334,971 of whom 269,673 are males. The occupational distribution of this total number is as follows :—

Exploitation of animals and vegetation ..	207,490
Exploitation of minerals	4
Industry	50,650
Transport	5,815
Trade	25,067
Public force and administration	5,008
Professions and liberal arts	5,866
Persons living on their income	507
Domestic service	3,530
Insufficiently described occupations	27,466
Unproductive	3,568
Total ..	334,971

The industrially occupied proportion of the total earners is about 15·2 per cent. However, not all the 2,07,490 persons shown against "exploitation of animals and vegetation" are engaged in cultivation. That figure can be further analysed as below :—

Cultivation	199,287
Forestry	663
Stock-raising	7,307
Fishing	233
Total ..	207,490

It will thus be seen that 8,203 persons are engaged in such more or less industrial occupations like forest industries, stock-raising and fishing. Adding these, the total principal earners engaged in industrial occupations number 58,853.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births for the five years ending 1937, was 37·45 per thousand while that of deaths was 29·93 per thousand. The survival rate for the district is thus 7·52 per thousand.

The district has six hospitals, 12 dispensaries, and one child welfare centre. Of the six hospitals, four are maintained by charitable institutions, one by the Madras and Southern Maratha Railway and one by Government. Three of these hospitals and the child welfare centre are at Hubli, while the remaining three hospitals are at Dharwar, Gadag and Haveri respectively. The total number of doctors in the district is estimated to be 88 including 20 in the town of Dharwar. The proportion of doctors to total population in the district excluding Dharwar town, comes to one for every 17,406 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 114,765 persons were returned as literate thus constituting a literacy percentage of about 10·4.

The educational facilities available in the district are summed up in the following statement for the year 1937-38 :—

	Number of Institutions.	Number of Pupils.
Primary schools	922	78,365
Secondary (including lower secondary and English teaching) schools	27	5,172
Industrial, commercial and agricultural schools ..	1	32

Of the 1,279 villages in the district, only 663 villages had schools in them.

Transport Facilities.

7. The district is well served by railways which traverse from north to south and from east to west. As for roads the total length of roads maintained both by Government and the local authorities is 968 miles of metalled and 338 miles of unmetalled roads. All the important towns in the district and in the neighbouring territories are connected by regular motor bus services.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 2,949,908 acres, of which 2,270,330 acres constitute the gross cropped area. Forests absorb more than 236,145 acres while other uncultivable land is 243,460 acres. Current fallows account for 183,367 acres and 37,851 acres are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the total cultivated area in 1937-38 :—

	Area in acres. 1937-38.
Rice	137,861
Wheat	283,854
Jowari	546,369
Bajri	5,940
Ragi	34,492
Gram	38,977
Other food grains including pulses	288,521

	Area in acres. 1938–39.
Linseed	10,491
Sesame (*til*)	7,279
Groundnut	81,435
Castor seed	3,639
Other oil-seeds	56,842
Condiments and spices	66,022
Sugarcane	1,775
Cotton	573,604
Other fibres	5,639
Tobacco	622
Other drugs and narcotics	1,685
Fodder crops	114,243
Fruits and vegetables	11,012
Other miscellaneous crops	28
Total ..	2,270,330

It will be noticed that the most important food-crop of the district is *jowari;* while cotton is the most important commercial crop. These two crops taken together account for nearly 50 per cent. of the total cultivated area. The other important crops are wheat, rice, groundnut and linseed.

In 1937–38 fruits and vegetables accounted for an area of 11,012 acres. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following details in respect of 1938–39 :—

	Area in acres. 1938–39.
Vegetables—	
Potatoes	535
Sweet potatoes	171
Carrot	150
Radish	120
Onions	2,077
Others	3
	3,056

	Area in acres. 1938–39.
Green vegetables—	
Fenu-greek (*methi*)	128
Edible hibiscus (*bhendi*)	551
Water melon	85
Others	4,676
	5,440
Fruits—	
Plaintain	433
Mango	1,682
Lime	73
Guava	687
Others	18
	2,893
Total, Fruits and Vegetables ..	11,389

The district has an area of 114,243 acres under fodder. To the east of the Mallad region, there are some very fertile tracts of black soil which usually have an abundance of *kadbi* and pulse fodders. There are also some fair grazing grounds on the uplands notably in the Dharwar, Haveri and Ranebennur talukas, and in the red soil areas in the Bankapur, Ranebennur and Gadag talukas. The common village cattle show the benefit of superior fodder supply by their size and better condition but their breeding is left to chance, and they are susceptible of much improvement. Most cultivators practise rearing rather than breeding. According to the Census of cattle taken in 1934–35, the details of live-stock in the district are as follows :—

Bull and Bullocks (working, breeding and young stock)		254,854
Cows	do.	168,304
Buffaloes	do.	35,076
Cow-buffaloes	do.	150,224
Sheep and goats		185,353
Horses and ponies		3,063
Donkeys		4,257
Camels		111

Of these, milch cattle number 183,949 consisting of 97,136 cows and 86,813 cow-buffaloes.

Survey of Resources : Minerals.

9. The district contains specimens of granite, transition rocks, red sand-stones and iron-bearing clay-stones. The Gazetteer mentions that in former times gold was obtained in the neighbourhood of the Kappat hills. The Collector of the district reports that a couple of years ago a prospecting license was given to a Syndicate but it seem that no work has yet been started. According to the Gazetteer it seems that an enquiry was undertaken by Mr. R. S. Foote in 1874, who found that the gold content of the reefs in question was not very appreciable. The Gazetteer further states, "Mr. Foote noticed that even if the reefs yielded a fair amount of gold, mining would have serious difficulties to contend against. No timber or fuel was available except at very great distances and water was very scarce except during the rainy season." It is also reported that for some time when fuel was plentiful in the Kappat hills and English iron was dear, much iron ore was smelted at Dhoni and other places in these hills. It was in fact suggested to the investigator by one of the iron and brassware manufacturers interviewed in the district, that Government should undertake experiments to find out the possibility of the commercial exploitation of iron ore in the district. The Gazetteer also mentions that manganese is found in considerable quantities in the district. Building stones of various kinds are also found in abundance. Further it is reported that ochre deposits are available in large quantities in Dharwar while the *Mamlatdar* of Gadag states that very good red soil is available in his taluka, which can be used for the manufacture of tiles.

Survey of Resources : Forests.

10. The tree growth in the district is generally poor except in Dharwar and Kalghatgi talukas where it is of fair quality. The forests of Dharwar, Kalghatgi and Hangal talukas give sufficient supply of fuel for local use and a moderate supply of poles for house building purposes. The remaining area produces only fuel which is barely sufficient for local consumption. It may be pointed out that sandal-wood is the only valuable wood in the district. The supply of grass in the local forests is just sufficient for the requirements of the district.

Survey of Resources : Power.

11. There are four electric supply companies in the district. They are :—

	Units generated (000s).	Total units sold (000s).	Units sold for power purposes (000s).
Hubli Electric Supply Company ..	633	438	352
Dharwar Electric Supply Company ..	286	229	104
Gadag Electric Supply Company ..	206	165	0·4
Haveri Electric Supply Company ..	29	27	*Nil.*

Besides these, two electric supply companies have been recently started at Byadgi and Ranebennur respectively, but they have not yet started working.

Survey of Resources : Capital.

12. In 1937–38 there were 496 agricultural co-operative societies and their total working capital amounted to Rs. 43·97 lakhs. During the same year there were also 73 non-agricultural co-operative societies with a working capital of Rs. 44·27 lakhs. The District Central Co-operative Bank had during the same year a working capital of Rs. 43·53 lakhs. In addition, there were 55 post office savings banks in the district, with 13,137 accounts current and having a balance of Rs. 22·7 lakhs in 1937–38. During the same year, cash certificates to the extent of Rs. 5·5 lakhs were sold in the district. The Imperial Bank of India, the Canara Industrial and Banking Syndicate and the Canara Bank have all their branches at Hubli while the Karnatak Banking Corporation has its head office there. There is also a branch of the Canara Bank at Dharwar.

Industries in the District—General.

13. The population engaged in industrial occupations has been estimated at 58,853 including the 8,203 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	391
Butchers	326
Tailors, milliners, etc.	2,854
Washing and cleaning	1,785
Barbers, hair-dressers, etc.	2,299
Scavenging	361
Total ..	8,016

The remaining 50,837 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	663
Stock-raising	7,307
Fishing, etc.	233
Cotton spinning, sizing and weaving	16,425
Rope, twine, string and other fibres	375
Wool manufactures	3,950

Silk spinning and weaving	580
Working in leather	801
Carpenters, turners, etc.	3,932
Basket-makers, etc.	1,265
Blacksmiths, etc.	1,426
Workers in brass, copper and bell metal ..	1,055
Potters	1,586
Manufacture and refining of vegetable oils	393
Rice pounders and huskers	305
Grain parchers, etc.	353
Boot, shoe, sandal and clog-makers	1,512
Lime burners, cement workers, etc.	4,523
Makers of jewellery and ornaments	2,780
Other miscellaneous industries	1,373
Total ..	50,837

Of these, 10,006 workers were employed in concerns coming under the Factories Act during the Census year, 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	3	8	2,682	3,552
Engineering	4	15	3,702	3,052
Minerals and metals ..	1	1	(not stated)	38
Food, drink and tobacco ..	....	1	....	9
Chemicals, dyes, etc. ..	3	3	117	100
Paper and printing ..	....	11	....	219
Seasonal factories (cotton gins and presses)	85	97	3,505	4,318
Total ..	96	136	10,006	11,288

14. The investigator, Mr. S. M. Muzumdar, spent 25 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The investigator interviewed the handloom weavers at Navalgund, Gadag, Hubli, Dharwar and Ranebennur. Of these, Gadag and Hubli are the more important centres of the handloom weaving industry in the district. It is estimated that in Gadag there are about 100 *karkhandars* employing about 2,000 workers and about 1,000 independent artisans. In Hubli, the estimate is that there are 1,000 independent artisans and 50 *karkhandars* employing 1,000 wage-earners. It appears that in the district as a whole, there are not less than 6,000 persons who are working as handloom weavers.

16. The raw materials used by the weavers are mostly cotton yarn and silk. A few people also use mercerised yarn. The cotton yarn is mostly of 60s for warp and 50s for weft, while some handloom weavers also use yarn for 40s for warp and 20s for weft. The cotton yarn is mostly Indian. Most of the weavers use silk which is obtained from Bangalore. The main products are *sarees*, *khans*, and to some extent *dhoties*. Most of the weavers interviewed, use throw-shuttle looms.

It is reported that weaving is carried on throughout the whole of the year, though work is rather slack in the rainy season. The products of Hubli and Gadag are sold not only in the district, but also outside. Both the employers and independent artisans also visit fairs in order to sell their cloth while personal canvassing is also resorted to. Sales are mostly on cash basis. Demand is specially brisk in the marriage season, but in the slack season goods accumulate and some of the employers lay stress upon the need for advances being given against the stock during the slack season.

17. Almost all the independent artisans interviewed admit that they are indebted to some extent. It is stated that *sowcars* are now very reluctant to lend money to the weavers as the weavers have hardly any property left, which the *sowcar* can hold as security. There is an Industrial Association at Hubli organised by the Department of Industries which sells yarn at cheap rates and purchases the finished products. Amongst the *karkhandars* there is good organisation. They specialise in different kinds of products. Some produce *khans*, while others produce *sarees*. Among the latter, there are again, some *karkhandars* who specialise in silk-bordered *sarees* while some others produce plain cotton-bordered *sarees*. Most of the *karkhandars* purchase grey yarn and get it dyed at the *karkhana* or through the outworkers.

18. Wages are paid on a piece-work basis and vary from Rs. 1-8-0 to Rs. 7-0-0 per *saree* according to quality and from Rs. 3-0-0 to Rs. 5-8-0 per unit of 32 *khans*. The wages for weaving *dhoties* are about 8 annas per *dhoti*. On an average the weaver seems to get about Rs. 8 to Rs. 10 per month from his work. The main complaint of the *karkhandars* is about the powerlooms and the competition of the independent artisans. This competition is said to have brought about a very heavy fall in prices. It is suggested that Government should stop powerlooms from working.

Blanket Weaving.

19. Medleri is a big centre of blanket weaving, it being estimated that there are 150 looms in that place, while the neighbouring village of Airani is reported to have 50 looms. The main feature of this trade is that there are no *karkhandars*. All the weavers are independent artisans and all belong to one community. A weaver takes about two days to weave a *kambli* of 50″ wide and 100″ long. The monthly income of these artisans is estimated to range between Rs. 6 and Rs. 8. The Medleri blankets are somewhat rough in quality while those of Airani appear to have a better finish. There was a time when these blankets had a large market in most of the big towns in the neighbouring territories. But now they have to depend mainly on the agricultural market. The main complaint of the artisans is about the difficulty in obtaining adequate supplies of raw wool. The woollen mills are reported to buy up most of the available raw wool supplies of the district. The price of raw wool has consequently gone up and moreover it becomes very difficult for the small weavers to obtain adequate supplies of wool even at the higher price. The artisans also find it difficult to sell their *kamblis* due to the competition of the factory-made blankets.

20. Recently, a wool-weaving school has been established here by the Department of Industries for educating the weavers in improved types of weaving. The weavers point out that the scholarship of Rs. 3 which is given to them by Government is quite insufficient and that they are too poor to maintain themselves on this amount during the period of training. They also point out that after their training on the improved type of loom, they should be given facilities to obtain loans at low rates of interest to enable them to purchase the new type of looms.

Carpet Making.

21. There are about 8 carpet looms at work in Navalgund. Weavers are all independent artisans. The yarns used, is 20s. It is stated that for making a carpet of 7′ × 3½′ it usually requires a week. The carpet makers earn on an average about Rs. 8 to Rs. 10 a month. The carpets are sold mostly locally. There is some demand for these carpets during the marriage season. But on the whole the demand for carpets has considerably fallen during recent years. The designs of these carpets are reported to be out of date, and it has been suggested that the weavers should be trained in weaving more popular and up-to-date designs.

Brass and Copperware.

22. The investigator interviewed 3 employers in the brass and copperware industry at Hubli. One of them employs 200 persons, another 100 and the third 250. It is estimated that there are about 20 *karkhandars* in Hubli employing about a thousand persons and the value of their output is estimated at Rs. 4 lakhs to Rs. 6 lakhs a year. About ten years back, the total sales of brass and copperware at Hubli was said to be worth about Rs. 25 lakhs a year. The raw materials used are purchased on credit. Complaints are made about the frequent fluctuations in the prices of raw materials. The work is mainly carried on by piece-workers who are given raw materials by the *karkhandars* or dealers. The piece-workers get work on an average, for only 2 to 3 days in a week. The best of the time is spent by them in idleness. Wages are paid on piece-work basis. On an average these outworkers get about 7 to 12 annas for the day they work.

23. The *karkhandars* complain that there is a big fall in their output during the last few years due mainly to the competition from power factories of cities and towns. It is also pointed out that there is a certain dispersion of the industry, places like Gadag and other marketing centres having now taken to make their own copper and brass utensils. Further, there is the complaint about the increase in the number of traders and consequent internal competition which has resulted in a fall in prices. The municipal tax and freight charges on the copper and brass sheets imported from Bombay are said to bear heavily on the trade. Further, changes in taste have worked in favour of the factories because their products are better designed and have a superior polish.

Manufacture of Machinery Parts.

24. The investigator interviewed four manufacturers of machinery, one at Hubli, one at Dharwar, and two at Gadag. The one at Hubli employs 100 persons and manufactures spare parts for rice-mills, flour-mills, bore-well pumps, etc. The goods are made to order, the markets being the Karnatak and Mysore. Sales are both on cash and credit basis. Wages paid vary from 6 annas to Rs. 2 per day. The manufacturer at Dharwar employs 9 persons and manufactures deep well-tubes, centri-fugal pumps, spare machine parts, etc. Of the two manufacturers interviewed at Gadag, one manufactures bore-well pumps, centri-fugal pumps, flour-mill machinery and parts of gin and press machinery. The other manufactures safes.

25. The persons interviewed generally express themselves as hopeful about the future of their industry, if sufficient encouragement is given to them. There is bitter complaint about the burden of freight charges, and the competition from other manufacturers. The Hubli manufacturer suggests that Government should explore the possibilities of

obtaining pig-iron from a neighbouring hill where stones containing about 40 per cent. of iron are said to be found. Both at Gadag and at Hubli there is a complaint about the municipal taxes which are levied both on the raw materials and on the finished goods. It is also suggested that Government should give their industry concrete help by themselves purchasing Indian pumps for their requirements. These manufacturers also request that they should be given loans at low rates of interest.

Rice-Mills.

26. The investigator interviewed 3 rice-mill owners : two at Dharwar and one at Hubli. All of them complain about the very severe competition of Rangoon rice. They suggest that the imports of Rangoon rice should be controlled and further that the Government of Goa should be asked to reduce their duty on the imports of rice into their territories. One of these mill-owners, complains that he does not get sufficient work for the whole year and that he has to crush oil-seeds in the slack season. He wants a loan from Government so that he can buy paddy for storing and husking. The rice-mill owner at Hubli also possesses an iron foundry where he manufactures rice-mill machinery and pumps. In fact, that is his main business. The rice-mill has been started by him in order to give trials to his machines.

Oil *Ghanis*.

27. The investigator interviewed one *ghani* worker of Navalgund. This man employs two persons. The *ghani* is worked for three days in a week, and *kusabi* (safflower) seeds are pressed. The owner claims to obtain an income of Rs. 10 a month from this occupation. His main complaint is about the competition of groundnut oil. He maintains that *kusabi* oil is more nutritious, though it costs more.

Oil-Mill.

28. The investigator also interviewed an oil-mill owner at Gadag, who employs 49 workers. He crushes oil worth Rs. 3,000 to Rs. 4,000 a month. Wages paid by him vary from 5½ annas to 6 annas a day for men and 3½ annas to 4 annas for women. The main complaint is about the severe internal competition between the different oil-mill owners in the district.

Tanning.

29. The investigator interviewed some of the tanners at Hubli, Dharwar and Gadag. Most of them are independent artisans who follow tanning as a hereditary occupation. It is estimated that there are between 35 to 40 families in Hubli who are engaged in this industry. At Dharwar, there are about 18 families of tanners while at Gadag there are 10 families. The raw materials consist of hides, *babul* bark, *harda* and lime. Some of them also use *divi-divi* for tanning purposes. The raw materials are purchased locally. There is a general complaint that the quality of local hides is very inferior ; and it is suggested that steps

should be taken to improve their quality. Another complaint is that owing to the large purchases of local hides by the export-merchants, very often the local tanners do not get sufficient supplies of hides.

30. The equipment consists of a few simple instruments, and the tanning pits. Some of the tanners have inherited these pits, while some have got them built. The whole process of tanning takes about a month. Excepting for the pounding of *babul* bark and *harda* which is done by women all the other processes are carried on by men. The methods followed are crude and the water used is very dirty, with the result that the leather becomes black. The tanners, however, are willing to learn new methods and to attend demonstration parties. But they want Government to give them subsistence allowances during the period of training.

31. Sales are mostly local and in the district. The tanned hides are taken for sale to weekly *bazaars* and also to the fairs. When stocks accumulate, the tanner goes round the villages and sells the hides to the village shoe-makers. The main complaint is about the chrome leather and canvas boots which are displacing the products made out of tanned hides. The demand for tanned hides is also further diminished due to motor tyres being used by the local *chamars* for making shoes. Then again, the urban tanners feel the competition of the village tanners who bring tanned hides to the town and sell them at cheaper rates. The artisans interviewed stated that the prospects for their industry are gloomy and that a number of people have given up tanning work and are working as labourers. Almost all of them are in debts. Their income varies from Rs. 10 to Rs. 20 a month. Generally speaking, they seem to get an income of Re. 1 per hide tanned by them, and their monthly income depends upon the number of hides that are tanned. For improving their industry, the artisans suggest that an adequate supply of hides should be secured to them, that they should be given suitable place to do their work, and that they should be taught new and improved methods of tanning.

Pottery.

32. The investigator interviewed some of the potters at Dharwar, Hubli, Navalgund, Medleri and Ranebennur. They are all independent artisans. All members of a family work. The potters utilise local clay. The articles prepared are sold in the weekly *bazaars*. The income of the potters varies from Rs. 4 to Rs. 6 per month per family.

33. The potters are reported to be in a very bad condition. Their main difficulty is the competition of modern machine-made products which are obtaining better patronage on account of the change in public taste. Thus, it is stated, their tiles are giving way before Mangalore tiles and cement concrete, their earthen *shegris* before iron ones and their earthen utensils before brass, copper and aluminium ones. There are also complaints about the competition of village potters who sell their wares at town *bazaars* at very cheap rates. The potters are all indebted and have to pay high interest.

Basket Making.

34. The investigator interviewed a few basket makers at Hubli, Dharwar and Gadag. It is estimated that there are about 100 families employed in this industry at Hubli, about 60 at Dharwar and only about 8 at Gadag. The bamboos are purchased from the local dealers who get them from the forest contractors. The usual price of a bamboo varies from 2 to 3 annas, depending on the quality. The articles made are mats for carts, baskets of different sizes, waste-paper baskets, sieves, etc. On an average, a family earns about Rs. 6 a month. The main complaint is about the fall in demand due to change in taste. It is pointed out that formerly the Government and the local authorities used bamboo-baskets for carrying road-metal, sand, etc., when making roads or building offices, but now baskets made of iron and other metals are being used for the purposes. Further, mats which were used for thatching houses are being replaced by corrugated iron sheets. The fall in bullock-cart transport has led to a further fall in the demand for mats. In addition to this general fall in demand, the bamboo-workers in this district feel the competition of workers from Kanara, who send their baskets to the different markets in the district in increasing numbers. The cane workers from Gokarn, Kumta and Sirsi in the Kanara district are also said to be competing with them.

35. For improvement of their industry the artisans suggest the formation of a purchase society which will enable them to get their bamboos at a lower price. It is also suggested that the fee charged by the Forest Department for permission to cut bamboos should be lowered. Further the industry is said to be entirely dependent on the prosperity of agriculturists and the artisans point out that unless some improvement is effected in the agriculturists' conditions, demand for their products will not show any substantial improvement.

Possibilities of New Industries.

36. The Gazetteer mentions that iron ore was smelted at some of the places in the district and one of the iron-ware manufacturers at Hubli suggested the possibility of exploiting iron ore found in the district. It has also been suggested that there is a good scope for utilising the forest products which are within easy reach of this district. The availability of oil-seeds and sandal-wood also indicates the possibilities of establishing sandal-wood oil and soap industries in the district. The large area under cotton in the district should make it possible to develop the cotton textile industry and the central position which Dharwar and Hubli occupy, make them ideal centres for supplying cloth to the whole of the Karnatak.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

KAIRA

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders, and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small-scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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KAIRA.

Position and Area.

The district of Kaira lies between 22° 14′ and 23° 7′ north latitude and 72° 30′ and 73° 23′ east longitude and has an area of 1,620 square miles. It is bounded on the north by the Ahmedabad district, Mahi Kantha and the small State of Balasinor in the Rewa Kantha Agency; on the west by the Ahmedabad district and the State of Cambay; on the south and east by the river Mahi and the Gaikwar's territory. The breadth of the district varies from 25 to 40 miles.

Physical Features.

2. Kaira is a lowland country situated between the rivers Sabarmati and Mahi which fall into the Gulf of Cambay. It consists of an almost unbroken plain and the land in the centre is a tract of most fertile soil. Besides the two large rivers already mentioned the country is well-watered by several smaller rivers. Embankments have been thrown across the Khari in the west near its junction with the Sabarmati and these serve to irrigate the rice fields of the neighbouring villages.

Climate and Rainfall.

3. From November to March the air is pleasant and bracing but the heat during the rest of the year is severe, dry and parching from March to May, moist and oppressive from June to October. The average rainfall is 34″, but although it is so moderate, the district is liable to flood, especially in the low-lying tract.

Population.

4. According to the Census of 1931 the district has a total population of 741,650 persons of whom 616,030 live in rural areas consisting of 570 villages while the remaining 125,620 are to be found in 10 towns. The important towns are :—

	Population.
Nadiad	34,584
Kapadwanj	16,556
Umreth	14,779
Borsad	13,191
Anand	11,660

The percentage of urban population to total population comes to 16·8.

The total number of principal workers in the district is 205,544 of whom 178,077 are males. The occupational distribution of that number is as follows :—

Exploitation of animals and vegetation ..	.. 148,100
Exploitation of minerals	.. 250
Industry	.. 19,690
Transport	.. 2,004
Trade	.. 10,175
Public force and Administration ..	.. 3,059
Professions and liberal arts	.. 5,461
Living on their income	.. 2,914
Domestic service	.. 2,095
Insufficiently described	.. 9,205
Unproductive	.. 2,591
Total ..	205,544

The proportion of the industrially occupied persons to the total earners comes to 9·3 per cent. Besides the 19,690 persons shown as engaged in industries proper according to Census classification, there are 3,822 persons engaged in stock-raising and 438 persons engaged in forest industries and though these are grouped under " exploitation of animals and vegetation " for purposes of Census returns, they can be taken to be industrially occupied. The total number of persons engaged in industrial occupations is thus 23,950.

Health and Medical Facilities.

5. Some indications of the health conditions in the district are provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 42·74. The mean ratio of deaths for the same period was 32·08 per thousand. The survival rate, thus works out to 10·66 per thousand which is the lowest in the Northern Circle.

(1) There is a big American Methodist Mission Hospital at Nadiad in charge of Dr. H.C. Aldrich. There is also one Saifi Sifakhana of Bohra community at Kapadvanj. These two institutions may be included in paragraph 5 of the report under the head "Health and Medical Facilities".

[redacted]

(2) Anand-Cambay Railway, Wasad-Kathana Railway and the Boriavi-Vadtal Railway sections existing in this district should be included in paragraph 7 of the report.

The district has six hospitals and twelve dispensaries. Of the six hospitals, one is in Kaira town and is maintained by Government; four hospitals, including one eye hospital, are at Anand and these are maintained by missions and private bodies. The sixth hospital is at Borsad and is maintained by a mission. The District Local Board maintains five dispensaries while the remaining seven are maintained by municipalities. The proportion of doctors in the district comes to 1 for 11,600 persons.

Literacy and Educational Facilities.

6. According to the Census of 1931, 91,691 persons were returned as literate, thus constituting a percentage of literacy of nearly 12·3 for the whole district.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	No. of Institutions.	No. of Pupils.
Primary Schools	716	60,139
Secondary (including lower Secondary and English teaching) Schools.	51	7,034
Industrial, commercial and agricultural Schools.	5	197

Of the 570 villages in the district, 366 villages had schools in them.

Transport Facilities.

7. The district is intersected by three lines of railways; the B. B. and C. I. main line, the B. B. and C. I. line from Anand to Godhra and the Nadiad-Kapadwanj Railway. The total mileage of both metalled and unmetalled roads in 1937–38 was 240·40 and 35·23 miles respectively.

Survey of Resources: Agriculture and Pasture.

8. The district has a total area of 986,837 acres of which 874,015 acres constitute the gross cropped area. Current fallows constitute 16,149 acres. The uncultivable waste or land which is not available for cultivation is 157,378 acres. There are 14,946 acres which are returned under culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area in 1937–38 :—

Description of crops.	Area in acres, 1937–38.
Rice	110,770
Wheat	19,048
Jowari	42,393
Bajri	135,650
Ragi	47,358
Maize	1,638
Gram	9,032
Other food grains including pulses	141,446
Sesame (*Til*)	8,560
Groundnuts	55,973
Castor seed	5,464
Other oil-seeds	251
Condiments and spices	4,775
Sugarcane	177
Cotton	96,375
Other fibres	3,371
Tobacco	80,117
Fodder	106,900
Fruits and vegetables	4,555
Other miscellaneous crops	162
Total ..	874,015

It will be noticed that cotton is the most important commercial crop of the district. The other valuable crop is tobacco which accounts for a considerable portion of the cropped area. This is grown mostly in the *charotar* tract, the central part of the district. Among food crops, bajri and jowari are the principal crops. Groundnuts are grown in considerable quantities and the other oil-seeds are castor and sesame which are grown to a lesser extent.

Fruits and vegetables account for an area of nearly 4,600 acres. Detailed information regarding this money crop was obtained from the

Department of Agriculture and the information supplied by that Department in respect of 1938-39 is given below :—

	1938-39. Acres.
Vegetables—	
Potatoes	690
Sweet Potatoes	320
Elephant foot (*Suran*)	21
Radish (*Mula*)	87
Onions	257
	1,375
Green vegetables—	
Edible Hibiscus	258
Water Melon	42
Others	1,663
	1,963
Fruits—	
Plantains	89
Mango	238
Lime	328
Guava	319
Papaya	127
Others	162
	1,263
Total, Fruits and Vegetables ..	4,601

The district is well supplied with fodder, the area under it being nearly 107,000 acres. It produces the best *kankreji* cattle in the Province and is thus very important in connection with cattle breeding. The chief breeding localities are Thasra, Kapadwanj and Matar talukas. Throughout the greater part of the district, the breed is essentially of the *kankreji* type and even the ordinary village cattle are also above the average of other parts of the Province. According to the Census

of cattle taken in 1934–35 the details of live-stock in the district are as follows :—

Bulls and Bullocks (breeding, working and young stock)	..	..	..	156,439
Cows	(do.)	..	..	38,773
Buffaloes	(do.)	..	..	21,427
Cow Buffaloes	(do.)	..	..	245,354
Sheep and goats	..	..	..	82,005
Horses and Ponies	..	..	..	1,887
Donkeys	..	..	..	5,593
Camels	..	..	..	696

Of these milch cattle number 154,109 consisting of 26,673 cows and 128,436 cow-buffaloes.

Survey of Resources : Minerals.

9. The Gazetteer states that iron ore was at one time worked in the neighbourhood of Kapadwanj. In the bed of the Majam river, about 15 miles from Kapadwanj, varieties of agate and moss-stone are reported to be found. The bed of the Mahi river contains masses and boulders of trap while on its upper course, on the Balasinor frontier, rock is plentiful including trap, with occasional limestone, quartz and granite. There are hot springs at Lasundra 10 miles south-east of Kapadwanj ; these are slightly sulphurious and are said to be useful for curing skin diseases.

Survey of Resources : Forests.

10. The district has no forests or forest lands. The trees either stand singly or in small groves. In the north the *mhowra* and in the south mango and *limdo* or *nim* are the commonest kinds. Mangoes are sent in considerable quantities to Baroda, Ahmedabad and Kathiawar. During the hot season the fleshy corolla of the *mhowra* flower is eaten by the poorer classes and by cattle.

Survey of Resources : Power.

11. There are 3 electric supply companies in the district. The figures of their output are given below :—

	Units generated.	Total units sold.	Units sold for power.
	(in 000s)	(in 000s)	(in 000s)
Nadiad Electric Supply Company Limited ..	327	287	217
Kapadwanj Electric Supply Company Limited.	28	15	*Nil.*
Anand Electric Supply Company Limited ..	98	74	26

Survey of Resources : Capital.

12. There were 102 agricultural ~~credit~~ societies in the district during 1937–38 and their total working capital amounted to Rs. 4·59 lakhs. There were also 20 non-agricultural credit societies with a working capital of Rs. 1·99 lakhs. During the same year, the working capital of the District Central Co-operative Bank amounted to Rs. 3·3 lakhs. There were also 110 post office savings banks in which there were 25,862 accounts current in 1937–38 with a balance of nearly Rs. 83·8 lakhs. Besides, postal cash certificates to the extent of Rs. 25·8 lakhs were sold in the district during the same year.

Industries in the District—General Survey.

13. The population engaged in industrial occupations has been estimated at 23,950 including the 4,260 persons engaged in stock-raising and forest industries. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed as makers of manufactured commodities :—

Butchers	219
Tailors, milliners, etc. "	999
Washing and cleaning	197
Barbers, hair dressers, etc.	1,778
Scavenging	967
Total ..	4,160

The remaining 19,790 may be regarded as persons engaged in industries proper. The Census tables give the following classified statistics :—

Stock-raising	3,822
Forest industries	438
Cotton ginning, cleaning, etc.	558
Cotton spinning and weaving	2,276
Rope, twine, etc., makers	222
Wool carding, spinning and weaving	880
Working in leather	1,284
Carpenters, turners, etc.	2,087
Basket makers, etc.	951
Blacksmiths, etc.	903
Workers in brass, copper, etc.	561
Potters and makers of earthenware	1,922
Brick and tile makers	189
Manufacture and refining of vegetable oils	727
Boot and shoe makers	181
Cabinet makers, etc.	363
Lime burners, etc.	1,404
Makers of jewellery and ornaments	651
Other industries	371
Total ..	19,790

Of these, 3,063 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	1	2	1,839	1,858
Engineering	1	2	11	18
Food, drink and tobacco ..	1	1	90	102
Chemicals, dyes, etc. ..	4	6	141	387
Paper and printing ..	....	1	....	21
Processes regarding wood, stone and glass.	....	3	....	75
Processes regarding hides and skins.	....	3	....	171
Seasonal factories ..	16	27	982	1,491
Total ..	23	45	3,063	4,123

14. The investigator, Mr. A. B. Trivedi, spent 12 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The investigator interviewed two independent workers at Mehmedabad. One weaves bath-towels and the other coarse cotton cloth. The former uses 20s yarn and works on a fly-shuttle. He also cultivates his small piece of land during the agricultural season. The towels are mainly produced to meet the orders from Ahmedabad and the Northern Division Industrial Co-operative Association, and the weaver finds no difficulty in marketing them. He gets a net income of about Rs. 20 per mensem. The other weaver weaves coarse cloth which he sells to the villagers. He earns about Rs. 7 to Rs. 8 a month for about nine months in the year. During agricultural season he works on his

(4) There are hand-looms at Traja, Alindra, Khandhali, Ratanpur, Undhela, Matar, Lawal and Vansar villages of Matar Taluka. This may be included under the head "Handloom weaving" (paragraphs 15-19 of the report).

(6) Laces for Saris are prepared at one factory in Navagam, Taluka Matar. These laces are being sent to Surat and Ahmedabad. This may be inserted at the proper place in the report.

land. He complains that due to severe mill competition he does not get a fair price.

16. At Karamsad some years back, there were about 60 looms. To-day there are said to be only six *saree* weavers, two towel weavers and four *gazi*-weavers. The counts of yarn used in this locality are mostly 8½s, 29s, 2/20s, 2/30s, 2/40s and 2/84s.

The investigator interviewed two independent workers. One of them reported that he produced towels worth about Rs. 1,250 during the past year while the other stated that he wove *sarees* worth about Rs. 1,100 during the same period. The products were sold in the district and the adjoining territories. The former estimated his income at Rs. 18 per month while the latter stated that both, he and his brother together earned about Rs. 35 a month.

17. There are about 40 looms at Borsad where *ghaghrapats* (women's garments) are woven. About 15 years ago, there were said to be nearly 300 looms at this place. This cloth is mostly prepared by women in their spare hours. They get about 12 annas on each piece of 24 yards × 31″ of cloth. A woman who can work for about 8 hours a day gets nearly Rs. 7 per month.

The dealers purchase the *ghaghrapat* cloth at the rate of Rs. 3-14-0 per piece of 24 yards × 31″, and sell it at Rs. 4. The consumers are mostly people from Dakor, who have a fancy for this product. It may be pointed out that the women folk of the families of the dealers also work in this industry and add something to their family income.

18. At Uttarsanda about 15 looms work in summer and about 8 in the rainy season. The investigator interviewed an independent worker and one outworker at this place. Both of them use 20s yarn. The former has a fly-shuttle loom and the latter a throw-shuttle loom. The independent worker has to purchase his yarn at Nadiad. He produces coatings and shirtings which are sold locally and in the surrounding villages by personal hawking. His net income from weaving is reported to be about Rs. 90 a year. In addition he gets about Rs. 40 a year from work on his piece of land during the rainy season. The out-worker gets the raw material on contract from a Bohra at Nadiad and gets a monthly income of Rs. 9 for himself and his family. At times when work on a contract basis is not available, he buys the yarn and produces cloth directly for the market and gets an anna or two more, but the additional time taken for marketing the product cancels the advantage.

19. At Gutal, there are only nine looms. Five are owned by out-workers and the rest by independent artisans. The investigator interviewed an artisan using a fly-shuttle loom. He uses 20s handspun yarn and earns about Rs. 9 per month. His products are sold in the taluka itself.

All the weavers interviewed complained against the power-loom competition from factories and mills. They wanted Government to put some restrictions on this competition. They also wanted some marketing arrangements whereby they could market their products easily, especially during the rainy season.

The Dairy Industry.

20. The Kaira district is famous for its dairy industry. There is a large number of dairies at Anand. Casein is exported every year to England, Holland, Germany, etc. And Bombay imports butter from Anand on an extensive scale. There is also a very large trade in *ghee* at Mehmedabad, Kapadwanj and Nadiad.

The investigator visited a big dairy at Anand employing about 130 persons. About 100,000 lbs. of milk are daily supplied to the dairy by merchants who collect it from the agriculturists. With the help of a milk separating machine, the cream is taken into a Pasturizer to kill bacteria. It is kept for a day in a condenser and later on transferred to a churner which prepares butter. In the separated milk acid is mixed and casein is prepared. Casein pieces are ground in powdering machines and then exported. The annual production of butter of this factory comes to about 1,302,373 lbs. and that of casein about 3,000 maunds.

21. At another dairy visited by the investigator at Anand, about 9 persons are employed on monthly wages varying from Rs. 10 to Rs. 15 per month. The employer owns a separating machine priced at about Rs. 300, a press for casein and a few tubs and gunny bags. The total value of the equipment is about Rs. 450. He purchases the milk required from the agriculturists, the prices of milk varying according to its butter contents. Butter is exported to Bombay and casein is sold to a local merchant. This *karkhandar* complains of internal competition from powerful individuals. Prices of casein are also reported to be going down year by year. As a result of these changes, his profits are steadily declining. He states that in 1925 he earned Rs. 10,000 ; his income came down to Rs. 5,500 in 1928 and to-day it is hardly Rs. 1,000. Other difficulties common to all dairies at Anand are : (1) absence of gradations according to quality, so that both superior and inferior quality butter is sold at the same price, (2) high transport costs from Anand to Bombay ; and (3) poor quality of milk due to partial starvation of cows and buffaloes.

22. Another establishment visited by the investigator was that of an independent worker engaged in powdering casein. He had a permanent assistant and occasionally engaged casual labour. The permanent assistant is given free boarding and lodging and is paid about Rs. 5 per month. His equipment, worth about Rs. 2,500 consists of two powdering machines and a crude oil engine. In 1937–38 his purchases amounted to about 75 tons of casein valued at about Rs. 21,000. The casein powder was exported to England, Germany, Holland, etc., and the total amount realised was nearly Rs. 22,500. He thus got about Rs. 1,200 for his work.

Brass and Copperware.

23. It is stated that there are about 400 artisans at Nadiad engaged in the brass and copperware industry. The annual production of brassware and copperware is valued at Rs. 5 lakhs to Rs. 6 lakhs.

One of the independent artisans interviewed at Nadiad has three family members working with him and specializes in copperware. Another mostly prepares brassware and is helped by eight family members. The former purchases annually copper sheets worth about Rs. 5,400 and the latter brass sheets worth about Rs. 10,000. The equipment consists of the usual tools and appliances and is worth about Rs. 400 to Rs. 450. The finished products are sold to local merchants and the village folk. The total value of the annual sales is reported to be about Rs. 6,600 in the case of the first family and Rs. 11,100 in the case of the second.

The artisans state that due to the increasing poverty of the agricultural classes, their business is very slack. They have also to face the stiff competition from cheap" and attractive factory-produced goods. According to one estimate the imports of such goods in the district are valued at Rs. 15 lakhs per year. The artisans want some restrictions to be placed on these imports. They also desire that internal competition should be minimised by starting an association for their industry which would regulate prices and hours of work. Lastly, they want Government to evolve a marketing scheme by which their goods can be sold without much loss of time and labour.

Glass Industry.

24. Kapadwanj is well known for its glass products. There were 25 to 30 factories working at this centre before Japan began to flood the markets with cheap glassware. To-day there are only two factories employing about 24 labourers.

The raw materials utilised in these factories, are pieces of broken glass, soda ash, coal, sand, etc. The broken glass is generally purchased from the sweepers and the ærated-water dealers of Ahmedabad. Both the factories manufacture small mirrors and bangles. The small mirrors are mostly used by shepherd women to decorate their dress. The market for them is Kathiawar and the Nizam's Dominions where women still wear their old fashioned dress with decorative mirrors. The owner of one factory informed the investigator that his earnings come to about Rs. 90 a month.

25. This manufacturer bitterly complains about the high railway rates on his raw materials. He points out that while the actual cost of his raw-materials like broken glass and sand, is negligible, the freight charges on railways are very prohibitive. He suggests that Government should arrange for reduction in these railway rates. It is also stated

that the demand for the old type of goods is steadily declining, and that the technique of production needs much improvement to cater to changing popular tastes. The manufacturers want training in the methods of preparing better quality bangles and also financial help.

Soap Industry.

26. Kapadwanj was well-known for its soap industry. It is reported that only a few years back, it had about sixty *karkhanas*. To-day only six are left. They give employment to about sixty wage-earners and the total output is estimated at about Rs. 24,000 a year. The investigator was told that the main reason for the decline of the Kapadwanj soap industry was the severe competition from large-scale factories.

27. One of the *karkhandars* interviewed, has an equipment worth about Rs. 175. The raw materials are locally purchased and consist of *mhowra* oil, caustic soda, lime, etc. All told, the annual expenditure on raw materials is about Rs. 6,000 and realisations from the sale of soap are about Rs. 7,200. He employs 3 to 4 labourers who are paid Rs. 8 to Rs. 10 per month. He has his own shop and his products are sold to merchants from the neighbouring villages. The *karkhandar* estimates his net income at Rs. 75 per month.

Leather Washers.

28. At Nadiad there are three workshops, engaged in manufacturing leather washers for ginning factories. Their total annual output is valued at about Rs. 1½ lakhs.

The investigator visited two of these workshops. One of them employs about 40 wage-earners and the other 75, and all are paid on a piece-rate basis. The leather available locally is said to be defective and the manufacturers, therefore, use chrome splits imported from America. The smaller manufacturer spent Rs. 24,000 and the other nearly Rs. 37,000 on raw materials during 1937–38. Both of them have borrowed a part of their working capital at about 9 per cent. interest. The total value of washers sold during the same year was Rs. 36,000 in the case of the smaller manufacturer and Rs. 55,000 in the other. The washers are sent to ginning factories all over India and a part of them are even exported to Africa and Burma.

The manufacturers complain of severe competition from Madras. Cheap imported coir and paper washers are reported to be used increasingly in India. Further, they have to pay high rates of interest on their loans. They also want the municipal and railway charges to be substantially reduced. The manufacturers suggest that if the local tanners are trained to prepare chrome leather on a larger scale, both the tanners and the washer-manufacturers would benefit.

(3) The Cottage industry of making bamboo-baskets is going on at the following villages of Matar Taluka :-

Machhial, Tranja, Dethli, Matar, Asalali, Traj, Nandoli, Devataj, Sinjiwada, Limbashi, Antroli, Sandhana, Lawal, Maliataj, Alindra, Siholdi and Bhalada.

This may be mentioned in paragraph 32 of the report.

Ornamental Enamel Work.

29. It is reported that some time back there were two artisans at Kapadwanj who were making enamelled gold and silver buttons, earrings, etc. One of them left for Bombay for improving his prospects and the other was interviewed by the investigator. This artisan generally works to order. Orders are received from a dealer in Surat and from stray customers. Two labourers and an apprentice work with him. The silver and gold required for his work are mostly supplied by the customers, though on occasions he himself purchases them. Coal, kerosene oil and chemicals are his other necessities. On an average, he estimates his net earnings at Rs. 50 a month. The two labourers are each paid about Rs. 15 to Rs. 16 a month. Business is reported to be slack in the rainy season.

30. The artisan wants to establish direct connections with his customers instead of depending upon dealers who make good profits. For this he needs capital at low rates. Secondly, he wants training in the preparation of cheap alloys of gold and silver for making cheap ornaments, etc., on a large scale.

Manufacture of Razors.

31. There are about four razor manufacturers at Umreth and their total annual output is estimated to be worth nearly Rs. 1,200.

The investigator interviewed one of these artisans. He has an assistant on a daily wage of 8 annas. He makes razors and scissors out of old iron files purchased from the mills of Nadiad and Ahmedabad. In 1937–38 he purchased files worth about Rs. 18. But expenditure on coal and chemicals was rather heavy and came to about Rs. 60. The value of razors and scissors turned out was Rs. 480. He estimates his net income at about Rs. 25 per month. But most of this income is earned by him from repairs work. The razors are sold to the village barbers. The manufacturer complains that he is rapidly losing his market due to the increasing popularity of foreign, especially German, razors. He is somehow carrying on his industry because the old fashioned village barbers still appreciate his products.

It was suggested to the investigator that these workers should be made familiar with the technique of production on machinery and should be supplied with the necessary machinery on easy terms.

Bamboo Work.

32. The investigator interviewed bamboo workers at Gutal and at Uttarsanda in the Nadiad taluka. These artisans are assisted by their families. At both the places the industry is in the hands of *bhangis* whose main occupation is generally sweeping. It is reported that there are six families of bamboo workers at Gutal and thirteen at Uttarsanda.

One of the artisans interviewed at Gutal uses old bamboos, purchased at 8 for Re. 1 and produces baskets and mats worth about Rs. 12 per month. During the rainy season he works on his piece of land. All told, he estimates his net income at Rs. 80 per annum. Of the two artisans interviewed at Uttarsanda, one produces goods worth about Rs. 31 per annum and the other who has a bigger family, about Rs. 110. The former also works as an agricultural labourer when such work is available. Both these artisans use new bamboos purchased at 5 for Re. 1. Both the Gutal and Uttarsanda workers have to go on foot to Nadiad for purchasing their raw materials. The finished products are sold locally and in the surrounding villages by hawking from house to house.

33. The bamboo-workers complain about the narrowing of their market. The increasing use of road metal carriers made of iron and other metals, has very much affected the demand for their products. They get some business only because of the tobacco plantations. Due to the fall in demand, prices have gone down considerably. It is stated that a basket which in 1925 fetched about 6 annas hardly fetches $2\frac{1}{2}$ annas to-day. These workers want Government to supply them with bamboos at low rates. They also desire that the Public Works Department, District Local Boards and Municipalities should go in for their products instead of using iron and tin road-metal carriers. A suggestion was also made that these artisans should be taught better methods of production.

Ghee Making.

34. Mehmedabad is a big centre of *ghee* trade. Annually about Rs. 2 lakhs worth of *ghee* is reported to be exported from here to Surat, Broach and Baroda. *Ghee* for export is generally purchased by dealers from agriculturists. Apart from Mehmedabad, Kapadwanj and Nadiad produce Rs. 160,000 worth of *ghee* in about equal proportion.

The investigator was informed by the dealers that ghee of superior quality can be produced if the cattle get better fodder. Further it was suggested that strict action must be taken by Government against adulterated stuff so that the honest dealers may get their due price.

Preparation of Cloth-Buttons.

35. Muslim Women of Kapadwanj prepare buttons out of white cotton rags and yarn. By working for about 8 hours a day they can earn about Rs. 5 to Rs. 6 per month. In 1921 buttons worth about Rs. 1,700 were exported from this centre. The trade has now considerably declined due to changes in fashion and competition from buttons of better finish of Poona, Borsad, etc. The present local production per year is said to be not more than Rs. 100 in value.

(5) "Rope" making is going on at Heranj, taluka Matar. This may be included in paragraph 37(other industries) of the report.

Patrala OR LEAF-PLATE INDUSTRY.

36. At Umreth about 700 families are engaged in the production of leaf-plates for dining purposes from *khakhra* leaves. The work is generally done by women and children. The net income of a family may be put at Rs. 50 per annum. The industry is said to be much handicapped by the heavy freights on the exports to Bombay.

OTHER INDUSTRIES.

37. Among other industries in the district which may be mentioned are *bidi* making and blacksmith's work. At Umreth there are reported to be five *bidi karkhanas* employing about 500 wage-earners. The annual production at that centre is estimated to be worth about Rs. 2 lakhs. The blacksmith's industry is on the decline. The village artisans complain against the itinerent Marwari blacksmiths who visit their places and compete with them. Their earning are reported to have declined considerably and at present they do not get more than Rs. 15 per mensem.

POSSIBILITIES OF NEW INDUSTRIES.

38. Among the possible new industries may be suggested the cigarette industry. A considerable portion of the cropped area of the district is devoted to the tobacco crop and the tobacco leaf is stated to be superior to that grown in the Southern Maratha countries. It is also worth considering whether the groundnuts grown in the district cannot be utilised, with the help of oil-expellers, in the district itself. The Mamlatdar of Kapadwanj suggested the possibility of utilising the groundnuts for production of vegetable *ghee* by the hydrogenation process. The same officer was of opinion that soap and glass industries could be started at Kapadwanj on a large scale.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

NORTH KANARA

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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NORTH KANARA.

Position and Area.

The district of North Kanara lies between 13° 53′ and 15° 32′ north latitude and 74° 4′ and 70° 5′ east longitude and has an area of 3,946 square miles. It is bounded on the north by the Belgaum district, on the east by the Dharwar district and the State of Mysore, on the south by the South Kanara district of the Madras Province, on the west, for about 75 miles, by the Arabian Sea, and on the north-west by the territory of Goa. North Kanara is the most southernly of the coastal districts of the Bombay Province.

Physical Features.

2. The district consists of two widely differing tracts, one above and one below Ghats. The latter area is a fairly level plain along the coast from 5 to 10 miles in breadth and mainly consisting of rice fields and cocoanut grardens. As it approaches the Ghats it breaks up into small thickly wooded hills and valleys. The Ghats are covered with dense forest. To the east of the Sahyadri crest, stretches a wooded upland from 1,500 to 2,000 feet above the sea. Near the Ghats this upland in the north is mostly forest, dotted with a few rice fields, but in the south there are large and beautiful spice gardens. Towards the east the forest dwindles and there is more cultivation.

Stretching across the water-shed of the Western Ghats, North Kanara contains two sets of rivers—one flowing west to the Arabian Sea, the other east towards the Bay of Bengal. The Varada flows to the east while the Kalinadi, Gangavali, Aghnashani and Shiravati flow to the west. The last of these, forms the famous Gersoppa Falls.

Climate and Rainfall.

3. The climate of the different parts of the district varies greatly. The coast portion though moist is healthy ; but the forest tracts, especially the upland forests, are always malarious. The rainfall is certain and plentiful. The regular monsoon commences in June with heavy falls and continues till October. Of the two divisions of the district the lowland tract records the heavier rainfall. On the coast, the rainfall is the heaviest in the south, ranging from 156 inches at Bhatkal to 120 inches at Karwar. In the upland parts the rainfall varies according to the distance from the Sahyadris.. At the top of the Ghats it is as heavy as 300 inches. But in the east at Haliyal and Mundgod, the rainfall is usually only 46″.

Population.

4. The district has a total population of 417,835 persons of whom 348,557 live in rural areas consisting of 1,226 villages, while the remaining 69,278 are to be found in 7 towns. The more important towns are :—

	Population.
Karwar	16,122
Kumta	14,554
Bhatkal	8,938
Gokarn	8,506

The proportion of the urban population to the total population is about 16·5 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 106,096 of whom 85,606 are males. The occupational distribution of the total number is as follows :—

Exploitation of animals, vegetation and minerals	72,217
Industry	9,446
Transport	3,878
Trade	5,932
Public force and administration ..	2,694
Professions and liberal arts ..	2,320
Living on their income	254
Domestic service	673
Insufficiently described	6,819
Unproductive	1,863
Total ..	106,096

The proportion of the industrially occupied persons to the total principal earners is about 8·8 per cent. But in addition to the 9,446 persons shown as industrially occupied according to Census classifications, there are 829 persons engaged in forest industries, 1,037 persons engaged in stock-raising and 5,486 persons engaged in fishing. These persons, though they are shown under "exploitation of animals and vegetation" for purposes of Census classification, are engaged in more or less industrial occupations and can be included among the industrially occupied persons in the district. The total number of principal earners engaged in industrial occupations then comes to 16,798.

Health and Medical Facilities.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births per thousand for the

five years ending 1937 was 34·27 while the mean ratio of deaths was 28·31. The survival rate for the district is thus 5·96 per thousand. In comparison with the other two coastal districts *viz.*, the Kolaba and Ratnagiri districts, the health conditions of the Kanara district appear to be extremely bad.

There is only one hospital in the district which is maintained by Government and situated in Karwar. In the whole of the district, there are 13 dispensaries of which five are maintained by municipalities, seven by the District Local Board and one forest dispensary by Government. There are 36 doctors in the district, including 8 in Karwar town. The proportion of doctors to total population in the district excluding Karwar town, is one for very 14,417 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 40,732 persons were returned as literates thus constituting a literacy percentage of about 9·7 for the whole of the district.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	368	24,445
Secondary (including lower secondary, English teaching) schools	17	2,311
Commercial, agricultural and industrial schools	*Nil.*	*Nil.*

Of the 1,226 villages in the district only 281 villages had schools in them.

Transport Facilities.

7. The Madras and Southern Maratha Railway just touches the fringe of the north-west corner of the district but is hardly of any use as that part is sparsely populated. The district as such does not enjoy the benefit of rail transport. There is a bi-weekly steamer service communicating with Bombay which is closed for the monsoon. Karwar has a natural harbour and is the only safe harbour between Bombay and Cochin during all seasons of the year. The other principal ports in the district are Kumta, Tadri, Honavar and Bhatkal.

The total length of roads maintained by Government and the local authorities is 553 miles of metalled and 660 miles of unmetalled roads. Road communications, however, are not satisfactory, as frequent stoppages of road transport occur during the monsoon season, the very period when the steamer services come to a standstill and there is great need of an alternative means of transport.

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SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has a total area of 2,527,059 acres of which about 243,653 acres or less than 10 per cent. constitute the gross cropped area. Forests absorb 2,063,913 acres while other land which is not available for cultivation is 73,545 acres. Current fallows constitute 104,870 acres. The culturable waste or land which is theoretically available for cultivation is 58,025 acres.

The following table gives details of the classification of crops of the cultivated areas :—

	Area in acres. (1937-38.)
Rice	156,845
Jowari	465
Ragi	1,728
Gram	307
Other food grains including pulses ..	6,749
Groundnut	193
Cocoanut	11,646
Other oil-seeds	403
Condiments and spices	4,208
Sugarcane	2,860
Drugs and narcotics other than tobacco	16,993
Fodder	28,709
Fruits and vegetables	7,955
Other miscellaneous crops	4,592
Total ..	243,653

The main crop of the district is rice which, it is reported, is not enough to maintain the population. There are no commercial crops except spices, drugs and narcotics. These are cultivated in the spice gardens of Sirsi, Siddapur and Yellapur talukas. Betel nuts, black pepper and cardamoms are the most important crops under this category. The district is also important in its cultivation of cocoanuts as next to Ratnagiri, it has the largest area under it in this Province.

Fruits and vegetables accounted for 7,955 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following information in respect of 1938-39 :—

	Acres. 1938-39.
Vegetables—	
Sweet potatoes	321
Onions	199
Others	111
	631

	Acres.
Green Vegetables—	
Edible hibiscus (*Bhendi*)	51
Water melon	46
Others	551
	648
Fruits—	
Plantain	3,889
Mango	1,481
Pineapple	31
Jack fruit	373
Kaju	907
Others	17
	6,698
Total, Fruits and vegetables ..	7,977

Though about 28,700 acres are returned as under fodder, the quality of fodder is poor and the supply is just enough to maintain the cattle in the district. The cattle are of an inferior type, especially below the Ghats. The details of live-stock in the district according to the Census of cattle taken in 1934-35 are as follows:—

Bulls and Bullocks (breeding, working and young stock)	110,293
Cows (do. do.)	100,805
Buffaloes (do. do.)	26,703
Cow-buffaloes (do. do.)	33,604
Sheep and Goats	3,184
Horses and Ponies	87
Donkeys	105

Survey of Resources: Minerals.

9. The Gazetteer states that iron ore is found in different places in the main range and spears of the Sahyadris and near Honavar. It is further stated that there are signs that iron was formerly being manufactured in different parts of the district. Recently a private company is reported to have attempted to prospect for iron ore in the Kumta taluka but given up the attempt as it found that the ore was available only in a restricted area.

Below the Ghats, the building stone is of a laterite kind while above the Ghats, it is granite. Brick clay consists of black mud found mostly in pond beds. At Ramanguli, Idgunji and some other places, white clay suitable for porcelain is found, and the potters of these villages make good unglazed vessels from that clay. It is further reported that white clay is also found at Honavar and that it is exported from that place to Bombay as it is said to be useful for sizing cloth and also for preparing blanco. Manganese is found in large quantities in the Supa, Dandeli and Yellapur areas and is being mined and exported by some private companies. Kaolin is said to exist in parts of Supa but its use does not appear to have been investigated. Sand found on the Bhatkal coast is said to be useful for the preparation of glass and is at present exported to Bombay. The Supa *petha* is believed to be rich in different kinds of minerals though no geological survey of the tract has yet been undertaken.

Survey of Resources : Forests.

10. Of all the districts in this Province, Kanara is extraordinarily rich in all kinds of forest produce. In fact, it is almost wholly a forest district, more than 2 million acres out of the total area of 2·5 million acres being under forest. The most important of the forest produce is timber. Teak and *sisum* are the common varieties of wood from which timber is prepared. There are many contractors in the district who purchase coupes and compartments of these and other kinds of wood by standing sale and export the timber to places like Bombay, Bhavnagar, Kathiawar and Goa. The timber is useful for furniture and for construction of buildings. The Madras and Southern Maratha Railway also obtains its supply of sleepers from these forests. The Divisional Forest Officer, Western Division, Kanara, reports that soft woods suitable for manufacturing matches, packing cases, plywood, etc., are available in fairly large quantities and that at present some of these soft woods are utilised by some of the match factories. Large quantities of fuel wood are extracted from the forests by the contractors and exported to Bombay, Ratnagiri and Mangalore. The Forest Officers consider that there is sufficient scope for the manufacture of charcoal and for starting a wood distillation factory in the district. Bamboos are available in large quantities in all the forests of the district. In the Western Division of the Kanara district alone, about 265,000 bamboos are reported to be cut locally every year mostly for agricultural purposes, for roofing huts and fencing, and for cottage industries such as preparation of mats, baskets, etc. Among other forest produce can be mentioned cane, *shendi* and *tali* palm, *harda*, *shigekai* pods and soap-nuts, honey, wax, etc.

Besides these, there are minor products such as wild pepper and *wavding* used for medicinal purposes, cinamon leaves and bark from which oil is extracted on a small scale, *surangi* flowers which when distilled yield a kind of perfumed oil, *tumbri* leaves from which *bidis* are prepared and *halmaddi dhup* (gum) used as incense after refining.

Excepting for timber, the question of commercial utilisation of the rich forest produce in the Kanara district does not appear to have been seriously tackled so far. The revenue yield from forest resources in the Kanara district during 1937-38 was as follows:—

	Rs. (in 000s).
Timber	12,15·5
Firewood and charcoal	70·9
Bamboos	47·9
Sandalwood	18·4
Grazing and fodder grass	11·7
Other minor produce	11·5
Total ..	13,75·9

SURVEY OF RESOURCES: POWER.

11. There is no electricity supplying company in the district. But the district has ample water resources which could be utilised for supplying the whole district with electricity. Thus, the triennial report published in 1921 on the Hydro-electric Survey of India mentions the following sites in the Kanara district as worth development and further investigation for hydro-electric purposes:—

(1) Site near the Kheda village about 3 miles above the junction of the Kali river with the Pandri river.

(2) Site near the village of Magod about 11 miles south of Yellapur and on the Bedti river.

(3) Site near the Sirsi-Kumta road about 18 miles from Sirsi and on Bene Nulla of the Tadri river.

(4) Site about 34 miles from Londa Railway station and 50 miles from Karwar and on the Kaneri river, a tributary of the Kali river.

SURVEY OF RESOURCES: CAPITAL.

12. There were 104 agricultural co-operative societies in the district during 1937-38 with a total working capital of Rs. 7·32 lakhs. The non-agricultural co-operative societies numbered 22 and their working capital amounted to Rs. 19·63 lakhs. The District Central Co-operative Bank had a working capital of Rs. 2·84 lakhs during the same year. In addition, there were 31 post office savings banks in the district with 6,360 accounts current and having a balance of Rs. 11·4 lakhs at the end of 1937-38. In the same year postal cash certificates amounting to Rs. 2 lakhs were sold in the district.

Industries in the District: General.

13. The population engaged in all kinds of industrial occupations has been estimated at 16,798 inclusive of 7,352 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed as makers of manufactured commodities:—

Sawyers	352
Butchers	16
Tailors, milliners, etc.	489
Washing and cleaning	302
Barbers, hair-dressers, etc.	518
Scavenging	45
Total ..	1,722

The remaining 15,076 may be regarded as persons engaged in industry. The Census tables give the following classified statistics:—

Forest industries	829
Stock-raising	1,037
Fishing, etc.	5,486
Cotton spinning, sizing and weaving ..	101
Rope, twine and other fibres ..	369
Carpenters, turners, etc.	1,314
Basket makers, etc.	498
Blacksmiths and other workers in iron ..	216
Workers in brass, copper and bell-metal	336
Potters and makers of earthenware ..	406
Manufacture and refining of vegetable oils	335
Rice pounders and huskers ..	777
Boot, shoe and sandal makers ..	352
Lime burners, cement workers, etc. ..	347
Makers of jewellery and ornaments ..	2,036
Other miscellaneous industries ..	637
Total ..	15,076

Of these, only 134 workers were employed in concerns coming under the Indian Factories Act during the Census year 1931. The following

statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931	1938	1931	1938
Government and Local Fund ..	3	1	122	94
Textiles	..	1	..	24
Engineering	..	1	..	29
Processes regarding wood, stone and glass.	1	3	12	37
Total ..	4	6	134	184

14. The investigator, Mr. S. M. Muzumdar, spent about 25 days and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small-scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Fishing Industry.

15. This is the main industry of the district, giving employment according to the Census of 1931 to as many as 5,486 workers. The important centres are Majali and Baitkhol in Karwar taluka, Belikeri in Ankola taluka and Kumta, Tadri, Honavar and Bhatkal in the rest of the district.

16. The nets used are of different sizes depending upon the nature of fish caught. Nets in common use cost from Rs. 5 to Rs. 30. They are usually prepared by the fishermen themselves from jute thread which is purchased locally. The small boats used by them cost usually Rs. 60 to Rs. 100. The bigger boats and *rampan* nets used for catching the large fish are in some cases borrowed from fish merchants. In other cases, the bigger boats and *rampan* nets are owned in partnership by about 40 to 50 fishermen. It is reported that even in regard to the fishermen using smaller boats, it is the usual practice with the traders to bind the fishermen by giving them small advances and compel them to work for them. The cost of a *rampan* net and boat is estimated to be between Rs. 2,000 to Rs. 3,000. The life of a net is stated to be uncertain. If the nets are not properly dried, then they are spoilt within a short time. The nets are also put out of use by the fish if the quantity or size of fish caught is too big for the nets. Usually, however, the smaller nets are said to last for two seasons. The fishermen complain that the barks of *Madat* (*terminalia tomentosa*) tree, which are used for colouring their nets cannot now be obtained from the forests.

17. The most common fish obtained on the Kanara sea coast, are *bangda* (Mackerel), *tarli* (Sardine) and *shingala* (Cat fish). These varieties are caught not far off from the coast. Bigger varieties particularly the type known as *mori* (Shark) are found about 5 to 6 miles away from the coast and mostly the *mopla* fishermen are said to be engaged in this kind of fishing. Fishing is done exclusively by men, while women help in curing, selling and other activities. It is reported that since the weekly visits of steam launches which come to one or two centres on the Kanara coast to collect fishing, the earnings of the local fishermen have considerably increased. The smaller independent fishermen suggest that more launches should be introduced on their coast as at present the launches visit only certain places and that too only once a week.

18. There are, according to the latest report, 14 fish-curing yards in the district. Nearly half the total quantity of fish cured in the district is, however, cured in the yards of the Karwar taluka alone. The fish generally cured, are *ghol* (Jew fish), *shingala* and *bangda*. The curing is done both by the dry and the wet methods. From each 100 *ghols*, maws worth about Rs. 12 are said to be obtained. Maws are obtained from *shingalas* also. It is stated that there was a great demand for these from China but due to the Sino-Japanese war, there is now no demand and the price has fallen very low. Most of the dried fish is sent to Colombo and some to Mangalore, Malabar, Ratnagiri, etc. It is reported that the Colombo merchants deliberately reduce prices and it is suggested that Government should establish a marketing agent at Colombo and also arrange to publish in the Bombay papers the prices of fish current in Ceylon markets for the information of these traders. The other suggestions are that Government should introduce new types of fishing nets, particularly like those used by the Kathiawar fishermen and hire them to the fish dealers. The traders also want a steam launch for fishing in the deep sea.

19. Both the fishermen and fish traders appear to be unanimous in their demand for reduction in the price at which salt is supplied to them at present. The main handicap of these independent fishermen is stated to be want of finance and they all want Government help in making it possible for them to get capital at cheaper rates.

20. The fishing industry in Kanara is now reported to be in a better position than it was some five years back, and the reason for this improvement is said to be the growth of large exports outside the district of both dried and fresh fish. It has been suggested that the industry can be further developed by the introduction of more steam launches for transport of fish, by deep sea fishing, and by opening of a fish preserving and canning factory.

Handloom Weaving.

21. There are no handloom weaving centres as such in the district. There are, however, a few individuals who prepare *chaddars* (cotton blankets), *panchas* (towels), and coarse *sarees*. The investigator interviewed some of them at Nandangadda, Majali, Ankola and Kumta.

Excepting the individual interviewed at Kumta who works on a Japanese automatic loom which cost him Rs. 125, all the other persons use fly shuttle looms.

22. The manufacturer at Nandangadda employs eight workers. He uses yarn of 20s counts and produces *chaddars* and *panchas*. The yarn is obtained from Bombay. The annual sales of both *chaddars* and *panchas* are about Rs. 8,000. The weavers are paid on piece-work basis and their earnings are estimated to be about Rs. 8 per month. There are also four boys who help in the preliminary processes and are paid Rs. 4 per month as wages.

23. The weavers at other places prepare *panchas* and the *karkhandar* at Ankola also prepares small *sarees* of a very coarse type. The annual production of these weavers does not exceed Rs. 500. The *panchas* are usually sold for 3 to 5 annas each, according to size. The *karkhandar* at Ankola however produces Rs. 5,000 worth of *panchas* and Rs. 3,000 worth of *kirgis* (small *sarees*). These *sarees* are usually sold for 14½ annas each and are purchased by the poor and illiterate womenfolk of the place. The patterns and products are reported to be very crude and unattractive. All the *sarees* are sold at wholesale rates to the local merchants.

24. The market for the *panchas* and *kirgis* is local and the weavers and *karkhandars* employ salesmen to take their products from merchants to merchants and house to house. The *karkhandar* at Nandangadda has, however, a more organised market and sells his *chadddars* and *panchas* not only in the district but also in Goa, Vengurla, Malwan, Ratnagiri, Hubli and Belgaum. His *chaddars* are reported to be of a good quality and the *karkhandar* states that he has obtained orders recently from a Bombay hospital for their supply. The general complaint, however, is that they are losing their markets steadily through the competition of cheaper mill-made products. Their other difficulty is in respect of the supply of yarn during the monsoon. During those four months they are very much handicapped by the stoppage of steamer communications and the unsatisfactory nature of other transport facilities. The suggestions made for the improvement of the industry are that Government should arrange for the supply of yarn at cheaper rates, buy their products, particularly *chaddars* for Government and Government-aided hospitals, and remove the tax levied by the municipalities on the import of yarn.

Sandalwood and Ivory Carving.

25. This may be said to be the only art-craft existing in this district. When Mr. Fernandes reported on this industry in 1927 he stated that the number of families engaged in this industry had fallen to 30 from about 70 to 100 engaged in this trade. From the investigator's report it appears that the position has deteriorated even more. At the two principal centres which he visited, viz.: Kumta and Honavar, about 14 families are now engaged in this trade. Besides Kumta and Honavar, this occupation is also followed on a smaller scale at Sirsi, Banavasi and

Siddapur. According to the estimate of the people engaged in the industry there seem to be not more than 25 families engaged in this occupation.

26. All these artisans belong to the *Gudigar* caste. The materials used are sandalwood, ivory and ebony. Of the four artisans interviewed by the investigator, three are mainly dependent on the carving industry while the fourth has other subsidiary occupations. All the articles prepared are reported to be of old and antiquated designs. The fourth artisan is a drawing teacher who is following this as a subsidiary occupation. He is, however, making modern articles such as cigarette cases, visiting card cases, fancy presentation boxes, etc. The brisk months for this trade are December and January, when tourists from all places come to see the famous Gersoppa Falls. The artisans have no marketing organisation and many of them after accumulating stocks take a trip to Bombay for selling the same.

27. The chief complaint of the artisans is about the inadequacy of the supply of raw materials. The sandalwood is mainly obtained from the Sirsi taluka and the exploitation of the same is a Government monopoly. The sandalwood carvers are granted a stipulated quantity of wood at concessional rates and they have to go to Sirsi to get their supply. It is stated that the six families with 18 workers in Honavar are only allowed 2½ maunds of sandalwood at a concessional rate, and the 8 families with their 30 workers at Kumta are given only six maunds. The artisans complain that this quantity is inadequate for their work. They estimate the normal requirements of an average family at 5 maunds a year. Even the present concessional rate is held by these *Gudigars* to be too high and they press for a reduction in this rate. Their further complaint is against the Forest Department which compels them to go to Sirsi for their supply, with the result that they have to incur additional transport charges.

28. The other raw material, ivory, is also not available to them in sufficient quantities. Such quantities as are available are of a poor quality. They purchase ivory at Bombay. This is African ivory and it is stated that it is not suitable for carving because of its brittleness. The *Gudigars* suggest that the Forest Department should collect and sell the tusks of the killed and dead wild elephants in the Kanara forests. They further complain about the keen competition that they suffer from Travancore and Mysore in sandalwood articles and from Japan and China in ivory articles. The sandalwood carvers suggest the establishment of an industry for the extraction of oil from sandalwood dust, as that material is now being wasted in the district. They also suggest that they should be given training in new and up-to-date patterns which will appeal to the urban consumers.

Manufacture of Copperware.

29. The investigator interviewed a coppersmith at Honavar who stated that he uses annually 440 maunds of copper sheets and prepares

utensils. The copper sheets are purchased locally. His instruments or tools are reported to be very old fashioned and worth only about Rs. 50. With the help of 5 employees he turns out utensils worth about Rs. 5,000 a year. Besides his own copperware, the coppersmith also stocks brass utensils manufactured at Hubli and Bombay for sale. The annual sales of these articles are estimated at Rs. 2,000. He gets about 8½ per cent. commission on these sales. He sells his wares at the village fairs and in the markets of Shirali, Sirsi and Gokarn. Of the 5 workers employed by him two are skilled and are paid Rs. 20 to Rs. 21 per month and the remaining two are paid Rs. 15 each, while the fifth who is a boy is paid only Rs. 4 per month. All these work throughout the year. The main grievance of the coppersmith is about the tax levied by the local municipality. He finances himself by borrowing money at the rate of 9 per cent. He, however, states that he would like to expand his business if Government can provide him with capital at cheaper rates.

" Iron and Brassware.

30. The artisan interviewed by the investigator works on iron and brass. He manufactures locks, cash boxes, handbags, door handles, hinges, knives and nut-crackers. The equipment is reported to have cost him about Rs. 100 and it is stated that the tools last for many years without much repair. The artisan takes one to two days to make a lock which is sold at 6 annas to Re. 1 according to quality. It takes a day to make 3 nut-crackers which fetch 10 annas to 14 annas each. Door handles are prepared six in a day and sold for Rs. 2 to Rs. 6 a dozen. Hinges and knives are made at the rate of about 4 to 6 pairs a day and sold for Re. 1 to Rs. 4 a dozen. The artisan's goods are marketed in the district itself. Even then, he faces competition from machine-made articles, Indian as well as foreign. Consequently he fails to dispose of his goods very profitably. The artisan wants Government help in providing him with improved types of appliances and tools and in supplying him with capital. He also suggests that Government should purchase his products for use in their offices.

Ship-building.

31. There is no ship-building industry as such in this district. At Honavar, however, there is a forest-contractor and trader in fish, who is reported to be constructing a big *machwa* (ship) once a year; this gentleman was interviewed by the investigator. Ship-building is only a subsidiary occupation with this merchant and the *machwas* constructed are used for the transport of his own goods. About 10 carpenters and other labourers are employed in the construction of the *machwa*. The wood required for the ship has to be seasoned and prepared for nearly three years. The tree of which, the wood is to be utilised is stripped of its bark and kept standing for one season. Then the tree is felled and planks are prepared of it and these planks are kept burried in sea-water for about a year. At the end of the year after the planks are

thus seasoned, oil is applied to them and they are bent with the help of machines to suit the requirements. It is stated that the actual construction of a *machwa* takes about 9 months. The carpenters and other employees are paid at the rate of 8 annas to Rs. 1-8-0 per day and they work for about 9 to 10 hours. The *machwas* are constructed mainly for purposes of transporting the timber which the merchant exports to Bombay. It is stated that a 50-ton *machwa* can carry about 2,000 *khandis* of wood and the usual charge for transporting timber is 4 annas a *khandi*. The *machwa* is filled to its capacity and it is reported that the merchant makes about Rs. 300 each way from carrying cargo to and from Bombay. The merchants at Honavar, Kumta, etc., are reported to be getting their supply of rice-bags, petrol and kerosene tins, etc., in his *machwa* as his charges are reported to be cheaper than the steamer charges. A *machwa* can make about 5 voyages in a year and the merchant states that he can get his capital back within the course of five years. He has a fleet of nine *machwas* and carries on the business of transporting cargo during the months of September to May. There are usually about 14 persons including the *Tandel* (Captain) on each *machwa*. Each of these is given a ration of 2 seers of rice and 6 pies per day. At the end of the season, the expenses on rations are deducted from the transport receipts and the balance divided half to half between the crew and the owner. On this basis, it is estimated that a *Tandel* gets about Rs. 80 during the season while the *khalasis* (sailors) get Rs. 60 each. There is keen competition from the steamers which have the advantage of speed and larger capacity. The merchant has no hopes about the future of the ship-building industry and states that unless there is an assured cargo or one's own cargo to be transported there is no profit in the industry. He suggests that Government can aid this industry by transporting their timber in country crafts instead of by railway from Dandeli and also by sending all their other cargo by these ships only. For the proper development of the industry, in his opinion, cheap wood and sufficient capital are essential.

Rice-mills.

32. Rice husking and the preparation of *ukda* or baked rice are the main occupations of the agricultural classes in the district. Usually the womenfolk are engaged in these occupations which they carry on in their homes. Recently, however, rice husking and baking of rice is being done at the rice mills.

33. These rice mills are run on oil engines. They get their supply of rice locally but they are unable to stock paddy as they do not have the necessary capital. Consequently many of those engaged in this industry are unable to work throughout the year. Now-a-days the rice mills are reported to be working only from November to April. Even then, they have work for 3 days in a week. The charges on equipment and repairs are reported to be heavy. In addition the owners have to pay rent for their mill premises. The annual turnover in the three mills visited by the investigator varies from Rs. 800 to Rs. 1,800. The earnings of the owners are reported to vary from Rs. 15 to Rs. 30 per

month. The labourers employed in these mills are few and are paid wages at the rate of 3 annas per working day.

34. The *ukda* rice and polished rice manufactured in these concerns are sold in the local market. There is also some demand from Goa. The industry is said to be much affected by the large imports of Rangoon rice into the district. Moreover, the owners of rice mills compete between themselves.

Fruit Canning.

35. At Karwar, the investigator visited the canning factory at Shejwad about two miles away from the town. The proprietor of this factory also owns a printing press and a rice mill. He carries on the business of canning mango and pineapple fruits only as a seasonal industry. The mangoes and pineapples are purchased through agents and in the local bazar. The mangoes used are of a variety known as *kala ishard* which is costly and which can be had only for about a month and a half. The other mangoes available in the district are stated to be not of uniform quality and the owner does not can them for fear of losing his reputation. He suggests that Government should have large plantations of good quality mangoes in the district so that the supply of mangoes of unifom quality can be assured. It is stated that in the local market the pine-apples are sold for very high prices, while the same variety of pineapples can be had in plenty in the neighbouring territory of Goa for about one-fourth of the price. But the Goa Government is stated to have imposed a heavy duty on the exports of pineapples and secondly the transport charges in conveying the fruit from Goa to the canning factory at Karwar are reported to be prohibitive.

36. Most of the processes of preparing and canning the mango-pulp are done by hand by skilled workers. It is stated that about 500 small tins can be prepared in a day. The equipment is simple and cheap. The mango-pulp tins are sold to the wholesale dealers at slightly concessional rates. Tins of different sizes are prepared and the prices vary accordingly.

37. The market for the canned fruit is mostly foreign. Formerly about 60 per cent. of the products were sold in China and the proprietor states that the Sino-Japanese War has severely affected his sales. Orders are reported to be received from Mombasa, Ceylon, Tibet and Mauritious. The products are sent direct to merchants of these places. Moreover, he has an agent in Bombay who canvasses orders for him. Not much competition is stated to be felt so far as the mango-pulp industry is concerned, but in pineapple, there is competition from other countries. There are five permanent and thirty temporary hands in the factory. The temporary hands are engaged for the season only. These workers are paid daily wages at the rates of 4 annas for women and 6 annas for men.

38. The proprietor is very optimistic about the future of the fruit-canning industry. He suggests that as there is a large demand for mango-pulp from foreign countries, Government should advertise the Indian products in all the foreign countries and that the High

Commissioner and the Indian Trade Commissioners should be requested to widely advertise, exhibit and push on the sales of mango pulp. He also suggests that for the proper development of this industry, adequate financial help and help in the supply of small machines for speeding up the different processes of pulping the mangoes, are necessary.

Molasses or Liquid *Gur*-making.

39. Some of the agriculturists in the district prepare molasses from the juice of the sugarcane locally raised. All the produce is consumed in the districts. Both *ghanis* and iron crushers are used for extracting the juice. The juice is boiled in large copper or iron cauldrons and stored in earthen pots or in tins. Besides the small agriculturists who prepare the molasses on a small scale, there are a few landlords who do this business on a large scale by employing hired labourers and their markets extend beyond the local limits.

40. The investigator interviewed at Karwar a leading manufacturer of molasses who though a pleader, was mainly engaged in this occupation. It is stated that he has 3 acres of land under sugarcane plantation and an irrigation plant worth about Rs. 4,000. He engages about 30 labourers during the season in addition to his permanent staff of one Engineer, and two peons.

41. It is reported that about 150 tins of liquid *gur* could be prepared from one acre of sugarcane. Each tin contains on an average about 2 maunds of *gur*. From his 3 acres of sugarcane plantation he gets 450 tins of *gur* annually and his total sales are worth about Rs. 1,800 a year. According to this landlord, 15 acres of sugarcane plantation forms a minimum unit for the manufacture of *gur* on a commercial basis, and if the plantations are smaller, the management, watering, and other charges become heavy. This manufacturer complains about the competition of solid *gur* from Kundapur, Dharwar and Belgaum. It is also stated that on account of the heavy monsoon to which this district is subject it is not possible to manufacture solid *gur* in the district. He also feels the competition from the local agriculturists who have not to incur management and labour charges and are able to sell their liquid *gur* at cheaper rates. Further, there are also marketing difficulties; dealers in liquid *gur* are reported to be deliberately delaying their purchases and offering lower prices as they know that the manufacturers cannot afford the cost of storage. The manufacturer, therefore, suggests that Government should arrange for a warehouse where they can keep their products on payment of a small fee. It is also suggested that the Demonstration Power Crusher belonging to the Agricultural Department should be sent to Kanara so that the advantages of power crushers can be demonstrated to all those engaged in the industry. Similarly Government help is requested for carrying out research to find out how solid *gur* can be prepared in the Kanara district. The need for financial assistance in the shape of *tagavi* loans and for reduction in the rates charged for fuel by the Forest Department, is also stressed upon.

Oil-seeds Pressing.

42. The investigator interviewed a few persons engaged in pressing oil-seeds on country *ghanis* at Karwar, Ankola and Majali. Oil is extracted from *undi* nuts (*Calophyllum inophyllum*), cocoanuts and cashew-nuts. *Undi* oil is used for lamps and also for painting boats. Cashew-nut oil is exclusively used for painting country boats.

43. The equipment of a *teli* consists of a country *ghani* estimated to cost Rs. 150, a cutting knife and four or five mats for drying the seeds and nuts. A *ghani* is said to last for nearly 50 years. Where the *ghani* is worked by a bullock, its maintenance charges are reported to be about 3 annas a day. *Undi* and cashew-nuts are available in large quantities from November to April throughout the district. The cost of cocoanuts is, however, said to be much higher than in Cochin where they are more abundant.

44. The process of extracting *undi* oil is very simple. The *undi* nuts are broken into small pieces and dried in the hot sun for about 3 days before they are pressed in the *ghani*. The same process is followed in the case of cocoanuts. One maund of oil can be extracted in one day. A different process is followed for cashew-nuts. The cashew-nuts are soaked in water for one night. Afterwards the kernel is taken out by breaking the nuts. The hard shells are then dried for two days in the hot sun. The shells are put in an earthen pot, the mouth of which is closed with a lid or cocoanut shell with a small hole at its centre. The pot is then turned upside down and covered from above with burning charcoal and cow-dung cakes. The oil that is produced from the heat is then collected drop by drop in a separate pot placed below the up-turned pot.

45. One of the artisans engaged in pressing *undi* oil states that for preparing one maund of *undi* oil, about 8 annas are paid as labour charges. In the brisk season the artisan presses about 3 maunds of *undi* oil per week and earns about Rs. 2 to Rs. 3-8-0. But the work is not regular and during the slack time the artisan has to keep his *ghani* idle. These artisans generally do not employ outside labourers, most of the work being done by members of their own families. As there is not enough demand and as there are no facilities for drying the nuts in the rainy season the industry is carried on only for some months during the year. It is reported that the market for *undi* oil has now narrowed a good deal due to the growing use of *til* oil which is more pure and available for the same price. Cocoanut oil from Cochin where cocoanuts are abundant and where oil is extracted in mills, has captured all their markets, so much so that the artisans have now discontinued pressing cocoanut oil. The cashew-nut oil industry which is carried on a very crude basis, meets with competition from cheap foreign varnishes. To sum up, the oil pressing industry in Kanara suffers from scarcity of cocoanuts, from the competition of oil mills, *til* oil and cheap varnishes.

Tanning and Shoe-making Industry.

46. Tanners and shoe-makers are found in almost all the towns and big villages in the district. The chief centres of the industry are, however, Karwar, Ankola and Kumta. The materials used are the raw hides of cows, bulls and buffaloes, lime, *harda* and barks of *madat* (*terminalia tomentosa*) and *jambul* (*eugenia jambolana*) trees. *Madat* bark is considered to be better than *jambul* bark. The hides are reported to be of a very poor quality and there is general complaint against the method followed by the *mahars* of dragging the dead animals along the roads to the flaying places. Secondly, the hides are reported to be unduly exposed to the sun. Lime is purchased locally and in some cases prepared by the artisans themselves. Regarding the tanning materials like *harda* and barks of *madat* tree, the tanners are experiencing great difficulties. It is stated that formerly they used to collect these materials from the forests but now they are prevented from doing so. The artisans have now to buy their supply of tanning materials. The tanning process takes 20 days; and the tanned hides are mostly used for preparing *champals*, etc., locally.

47. From a full hide of good quality five to six *champals* are made. Each pair of *champals* fetches about 12 annas to Re. 1. The *champals* are not smart, though they are reported to be durable. To prepare one pair of *champals*, the artisans take about a day. In the rainy season work is slack and *champals* are sold in the weekly bazars. It is stated that formerly there was a good demand for Karwar *champals* even from distant places like Bombay as they were known for their durability; but with the change in fashion, this demand has now declined. The shoe-makers in Ankola and Kumta take their *champals* to the annual fairs at Gokarn and Sirsi, where they are reported to make good sales.

48. The artisans are reported to be earning on an average about Rs. 15 to Rs. 20 per family. Their main grievance is about the quality of the raw materials available to them. They suggest that the *mahars* should be taught modern and improved methods of flaying and that they themselves should be taught better methods of tanning and also of preparing chrome leather.

Coir Rope-making.

49. The investigator inquired into the condition of the rope-making industry at Ankola, Honavar, Mavinkurve and Belikeri. Generally speaking, this industry serves as a subsidiary occupation to those who are engaged in agriculture and in fishing, the raw material used is the coir of tender cocoanuts. It is stated that if the cocoanut ripens its coir loses much of its value. As soon as the cocoanuts are plucked from the tree, husks are removed and buried in the earth for about 9 months. Afterwards they are taken out, beaten with hammer, washed in water and dried. As the cocoanuts get rotten within a few days if their husks are removed dealers in cocoanuts do not allow the tender cocoanuts to be plucked but wait for them to ripen well on the tree and

pluck them afterwards, and remove the husk only when the cocoanuts fetch a good price. Cocoanuts are thus stated to be usually kept for a month or so without the husk being removed. The result is that the rope-makers are not able to get fresh coir for their ropes. It is suggested that this difficulty can be removed if the artisans are taught the processes which can make the coir of the ripened nuts as useful as that of tender nuts.

50. Though rope-making is usually a subsidiary occupation with the agriculturists, many who are engaged in this industry have no savings with which to purchase their raw material. The artisans usually purchase it on credit on the condition of selling all their ropes to none but their creditor at a rate below the usual market price. The monthly income of an artisan is estimated to be not more that Rs. 4; it is much less in the rainy season and even during the other seasons there is no certainty of demand. In many instances, the artisans sell their whole stock for whatever they can get in order to meet their needs.

51. The coir industry of Kanara is reported to be much affected by the competition of Cochin ropes, as the latter are manufactured on a large scale with the help of machinery and are finer and cheaper. Moreover, the increasing use of iron straps for packing purposes has decreased the demand for ropes. As a result of these adverse factors, the persons engaged in this industry are reported to be finding it difficult to obtain a living wage, in spite of the long hours they spend upon their work. They, however, still carry on just in order to maintain themselves during the off season when there is no agricultural work.

Lime Kilns.

52. At Kumta, the investigator interviewed a lime-kiln owner who produced about 200 *khandis* of lime in a year. Lime is prepared from the shells of shell-fish which he collects from the villagers. He visits all the neighbouring villages for collecting his supply of shells. For producing 20 *khandis* of lime about 50 to 60 baskets of shells are required. The business is reported to be in a poor way as the demand for lime is rapidly falling because of the increasing use of cement. The price of lime has consequently gone down very much. When this artisan started his business about 20 years back, the price of lime was said to be Rs. 20 per 20 *khandis* whereas now it is not more than Rs. 7. Most of the lime he produces is sold in the neighbouring taluka of Sirsi. As the earnings from lime-preparation are not enough to maintain him, the artisan does the work of a stone mason as a subsidiary occupation.

Basket-making.

53. There is in the district a large number of persons engaged in making mats and baskets from bamboos which are available in large quantities in the district. It is reported that a permit fee is required to be paid to the Forest Department for removing the required quantities of bamboos. Each family engaged in the industry, therefore, contributes

and all together make up the amount of the permit fee to be paid to the Forest Department. As the economic condition of these artisans is bad, they are reported to be finding even this contribution to be too heavy for them.

54. Like many other industries in the district, this is also a seasonal industry. The work is brisk from October to May when there is a large demand for baskets and mats from the agriculturists. In the busy season, people come to the houses of these artisans and purchase mats and baskets while in the slack season the artisans take their products to the local weekly markets, fairs and nearby places. The increase in the motor bus traffic has caused a decline in bullock cart traffic, and consequently there is said to be less demand now for mats for purposes of covering the carts. Similarly, the increasing use of corrugated sheets has resulted in less demand for bamboo mats for thatching purposes while the general use of metalware has affected the market for baskets. The artisans do not get work throughout the year and the maximum monthly income per family is estimated at about Rs. 4 while the average monthly income is stated to be between Rs. 2 and Rs. 3 only. It is suggested that the industry can be improved by teaching the artisans easier and speedier methods of preparing mats and baskets and also by training them in the preparation of new and marketable articles.

Pottery.

55. The investigator interviewed some of the potters in the district. Most of them get their supplies from the beds of tanks and ponds. Excepting the charges for conveyance, they are not required to pay anything for their raw material; similarly firewood which is used for baking pots is collected from the neighbouring forests. In spite of these advantages the potters do not appear to be economically in a good position. There is no adequate demand for their products and they have no work throughout the rainy season. Moreover, the increasing use of brass and copperware is reported to have very much affected their market for pots. Labouring under these difficulties the potters are stated to be earning about Rs. 2 per month. The potters want to be taught the processes of making better looking and more modern type of earthenware. They further want proper marketing facilities for their products.

Possibilities of New Industries.

56. Unlike most other districts, the main problem of this district is not the decline of old industries but the absence of proper development of the industrial potentialities of the district. It may be mentioned at this stage that among the two most important reasons for this failure to utilise the raw material resources in the district are the lack of adequate transport facilities, and the increasingly malarious character of the district and the lack of systematic attempts to overcome the disease. Originally Karwar was a very good port. In fact, the

English had opened a factory at Karwar in the beginning of the 17th century and the natural safety of the harbour had led to a proposal to connect Karwar with railway to the interior so as to provide a seaport for the southern cotton districts. However, this scheme was abandoned in favour of the line in the Portuguese territory of Goa and since then the trade of Karwar has registered an enormous decline. In view of the industrial potentialities of the district, the general feeling is that it would be worth while once more considering the scheme of connecting up Karwar with rail.

57. The possibilities for industrial development in the district are naturally enough based on its possession of forest products of various kinds. To begin with, there is said to be ample scope for the manufacture of charcoal in the district. The availability of vast supplies of bamboo should, it is considered, make it feasible for a paper factory to be established at Kodibag in the Karwar taluka to which place bamboos could be conveniently floated down the Kalinadi river. Then again, it is reported that the kind of timber from which plywood can be prepared is available in abundance in this district and that, it should be possible to establish a plywood factory here. Further the possibilities of utilising the wood resources of the district for making picking sticks used in jute mills and bobbins used in the textile mills should be investigated. Then again, soft wood suitable for manufacture of matches is available in fairly large quantities. In fact, it has been reported that at present some of this wood is being actually utilised by the match factories located elsewhere. It may, therefore, be possible to start a match factory in the district itself. The vast supplies of cane available in the evergreen and semi-evergreen forests of Kadra, Karwar and Honavar ranges should make it possible, with proper training, for the establishment of cane work industry. Finally, it is pointed out that there is much scope for the introduction of small-scale carpentry and turnery throughout Kanara, for making toys, pieces of furniture, standard house fittings, boxes, etc.

58. Utilisation of its forest resources does not exhaust the industrial possibilities of Kanara. The vast groves of cocoanut trees all along the coast that the district has got, should make possible the establishment of a good coir industry. One of the leading workers in the district states that the cocoanuts of Kanara are bigger than those of Malabar and have, therefore, a longer fibre, and that given an adequate training it should be possible to prepare coir of better quality than the Malabar coir. It is estimated that about 5,000 tons of cocoanut husk become available every year, of which less than half are utilised for the manufacture of ropes and door-mats. This cottage industry can be developed to a large extent if improved methods of preparing coir yarn are introduced and better technique is taught to the local craftsmen.

59. Further, the district has a long sea-coast and an intrepid and experienced population of fishermen. Given adequate facilities for improvement, there should be an enormous increase in the output of fish in this district. It should also be possible to start in the district,

a number of industries based on fishing, such as the making of fish oil, fish-canning, preparation of fish guano; etc.

60. The district is also said to be rich in some kinds of minerals. The possibilities of utilising the deposits of white clay in Honavar for starting a porcelain industry deserve further detailed investigation. It has also been suggested that the possibility of manufacturing glass in Bhatkal should be fully investigated. Moreover, as has been pointed out in the beginning of this report, the district has vast hydro-electric resources, some of which have been already surveyed, but none of which has been taken up so far. The general opinion is that without a proper utilisation of these resources it will be difficult to develop to the full the industrial potentialities of the district.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

EAST KHANDESH

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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EAST KHANDESH.

Position and Area.

The district of East Khandesh lies between 20° 16′ and 21° 27′ north latitude and 74° 52′ and 76° 24′ east longitude and covers an area of 4,551 square miles. It is bounded on the north by the Holkar's territory; on the east by the Berar and Nimar district of the Central Provinces; on the south by the Nizam's Territory and on the west by the districts of West Khandesh and Nasik.

Physical Features.

2. East Khandesh abuts on the Deccan upland and includes on its northern frontier an extensive tract of high hills of the Satpuras. It is intersected by the Tapti river and drained by the Purna, Girna and the Tapti. The northern portions of Raver, Yaval and Chopda talukas are broken and hilly, thinly populated and covered with dense forests. The southern and western portions of the district are also hilly but the hills are not so continuous.

Climate and Rainfall.

3. The climate is on the whole healthy, though intensely hot, especially north of the Tapti, in the hot season. There is a tendency to malaria after the cessation of the monsoon rains, especially near the Satpuras. The average rainfall in the district is 28 inches.

Population.

4. The district has a population of 1,206,035 persons of whom 912,949 live in rural areas consisting of 1,468 villages, while the remaining 293,086 are to be found in 23 towns. The more important towns are:—

	Population.
Jalgaon	34,375
Bhusaval	27,989
Amalner	23,491

The proportion of urban population to total population is about 24·3 per cent. which is considerably higher than the corresponding figures for many of the other districts.

According to the Census returns of 1931, the total number of principal earners in the district is 4,32,945 of whom 3,05,291 are males. The occupational distribution of this total number is as follows :—

Exploitation of animals, vegetation and minerals.	309,644
Industry	48,921
Transport	6,617
Trade	19,455
Public force and administration ..	8,322
Professions and liberal arts ..	5,904
Living on their income	298
Domestic service	3,228
Insufficiently described	23,974
Unproductive	6,582
Total ..	432,945

The proportion of the industrially occupied persons to the total principal earners comes to 11·3 per cent. But not all the 309,644 persons shown against "exploitation of animals, vegetation and minerals" are engaged in cultivation. The figure can be further analysed as follows :—

Cultivation	297,818
Forestry	2,098
Stock-raising	7,949
Fishing, hunting, etc.	1,778
Minerals	1
Total ..	309,644

It will be seen that 11,825 persons are engaged in such occupations as forestry, stock-raising and fishing and for purposes of this survey can be taken as engaged in industrial occupations. The total number of principal workers in the district, engaged in the different industrial occupations, accordingly comes to 60,746.

Health and Medical Facilities.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was as high as 46·68. The mean ratio of deaths per thousand for the same period was 30·05. East Khandesh has thus a very high survival rate of 16·63 per thousand, which is only next to that of West Khandesh in the whole of the Province.

There is one Government hospital at Jalgaon, a railway hospital at Bhusawal and an eye hospital at Chalisgaon maintained by the Blind Relief Association. Of the 17 dispensaries in the district, nine are maintained by municipalities, and six by the District Local Board. The remaining two have been started under the Village Uplift Scheme. There are 77 doctors in the district but Jalgaon city alone has 20 of them. In the district excluding Jalgaon town, the proportion of doctors to population comes to one doctor for about 20,600 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 110,474 persons are returned as literates which constitutes a literacy percentage of 9·1 for the district.

The educational facilities in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	853	87,143
Secondary (including lower secondary and English teaching) schools.	39	5,251

There are no commercial, agricultural or industrial schools in the district. Of the 1,468 villages in the district only 617 villages had schools in them.

Transport Facilities.

7. The district has good railway communications. The Great Indian Peninsula Railway from Bombay to Jubbulpore runs through the district via Chalisgaon, Jalgaon and Bhusawal. From Chalisgaon a branch line runs to Dhulia. The Pachora-Jamner Railway about thirty-five miles long was opened in 1918. From Jalgaon there is a branch line running to Amalner whence the Tapti Valley Railway links up with Surat. The Nagpur Railway branches off at Bhusawal.

There are a number of feeder roads connecting all the taluka and *mahal* headquarters with the railway. Separate figures of road mileage are not available for East Khandesh but both East and West Khandesh taken together had a total length of 1,002 miles of metalled roads and 733 miles of unmetalled roads in 1937–38.

Survey of Resources : Agriculture and Live-stock.

8. The district has a total area of 2,908,695 acres of which 1,986,204 acres constitute the gross cropped area. Current fallows constitute 114,398 acres. Forests occupy 408,654 acres while other uncultivable land measures 363,051 acres. There are 62,615 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area :—

	Area in acres. (1937-38.)
Rice	491
Wheat	56,805
Jowari	328,888
Bajri	241,809
Maize	616
Gram	8,352
Other food grains including pulses ..	269,975
Linseed	937
Sesame (*Til*)	8,554
Groundnuts	325,513
Other oil-seeds	2,486
Condiments and spices	14,142
Sugarcane	706
Cotton	703,396
Other fibres	4,788
Tobacco	833
Fodder	2,476
Fruits and vegetables	13,647
Other miscellaneous crops	1,790
Total ..	1,986,204

The major crop of the district is cotton which accounts for as much as 35 per cent. of the cropped area. The other important commercial crop is groundnut.

Fruits and vegetables accounted for an area of 13,647 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following details in respect of 1938-39 :—

	Acres. 1938-39.
Vegetables—	
Sweet potatoes	296
Carrot	99
Radish	166
Onions	499
Others	98
	1,158

	Acres. 1938-39.
Green vegetables—	
Fenugreek	148
Edible Hibiscus (*Bhendi*)	1,447
Musk melon	575
Water melon	268
Others	1,577
	4,015
Fruits—	
Plantain	5,073
Mango	116
Lime	198
Sweet lime	2,665
Guava	1,123
Others	588
	9,763
Total, fruits and vegetables ..	14,936

The district has only 2,476 acres under fodder crops. Most of the grazing areas are in the forest tracts which afford good grazing to most of the cattle. The district of East Khandesh is not so important a breeding centre as its adjoining district of West Khandesh. According to the Census of cattle taken in 1934–35, the details of live-stock in the district are :—

Bulls and Bullocks (breeding, working and young stock).	293,909
Cows .. (do. do.)	175,329
Buffaloes (do. do.)	18,143
Cow-buffaloes (do. do.)	132,633
Sheep and goats	223,751
Horses and Ponies	8,859
Donkeys	6,947

Of these, the milch cattle number 183,987 consisting of 105,385 cows and 78,602 cow-buffaloes.

Survey of Resources : Minerals.

9. The district as a whole has little mineral wealth. Trap-rock and gravel are found everywhere and are mostly used for road-mending. Limestone and clay are found in some parts of the district. There are some hot springs in the Chopda taluka. The water is slightly sulphurous and is believed to cure skin diseases. The investigator reports that along the Tapti banks in East and West Khandesh districts red alluvial soft rock formations are found in several places. It is locally believed that high class pottery can be made out of this material.

Survey of Resources : Forests.

10. The forests of this district are poor and yield small timber and fuel, chiefly for local consumption. They, however, contain such trees as *mhowra, anjan, avla, babul, bel, khair,* mango and *palas,* and also minor products like *rosha* grass, *bor* fruits and reeds. The *mhowra* tree is one of the most valuable of Khandesh trees, the flowers of which are used at present for producing liquor. The *anjan* tree yields a strong bark useful for preparing ropes, while *avla* tree is known for its use in the preparation of ink. The *palas* tree which is a common Khandesh tree, is useful in many ways. From the stem of the tree a gum called the kino gum can be produced. The root and bark yield tough fibre, while the flowers yield a valuable dye. The juice of the tree is used for medicinal purposes. Besides these uses, this tree is reported to be a favourite with the lac insect. Of the minor products, *rosha* grass is useful for extracting oil used in the preparation of scents ; the *bors* or *ghatbors* are useful for tanning leather, and the reeds are utilised for thatching purposes.

For purposes of forest administration, the two Khandesh districts have been split up into East Khandesh Division, North Khandesh Division and West Khandesh Division. Roughly speaking the East Khandesh Division can be said to represent the civil district of East Khandesh. According to the Forest Administration Report for 1937-38, the revenue derived from different forest resources for the East Khandesh Division was as follows :—

	Rs.
Timber	15,196
Firewood and charcoal	18,523
Bamboos	9,705
Grazing and fodder grass	94,197
Other minor products	4,207
Total ..	141,828

Survey of Resources : Power.

11. There are four electric supply companies in the district. The figures of their output of electricity are given below :—

—	Units generated.	Total units sold.	Units sold for industrial purposes.
	(000s).	(000s).	(000s).
Jalgaon Electric Supply Company, Limited ..	335	282	138
Amalner Electric Supply Company, Limited ..	197	172	88
Bhusawal Electric Supply Company, Limited ..	22	17	0·7
Chalisgaon Electric Supply Company, Limited ..	109	81	61

Survey of Resources : Capital.

12. There were 563 agricultural co-operative societies in the district in 1937–38 with a total working capital of Rs. 63·1 lakhs. There were also 31 non-agricultural co-operative societies with a total working capital of nearly Rs. 32·29 lakhs. During the same year, the District Central Co-operative Bank had a working capital of Rs. 59·03 lakhs. Besides, there were 60 post office savings banks with 16,498 accounts current at the end of 1937–38 and having a balance of Rs. 28·7 lakhs. The amount of cash certificates sold in the same year was Rs. 4·1 lakhs. At Jalgaon, there is also a branch of the Imperial Bank of India.

Industries in the District—General.

13. The population engaged in industrial occupations has been estimated at 60,746 including the 11,825 persons engaged in stock-raising, forest industries, and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	297
Butchers	1,375
Tailors, milliners, etc.	3,124
Washing and cleaning	1,390
Barbers, etc.	3,395
Scavenging	1,029
Total ..	10,610

The remaining 50,136 may be regarded as persons engaged in industry. The Census tables give the following classified statistics:—

Stock-raising	7,949
Forest industries	2,098
Fishing, etc.	1,778
Cotton ginning, pressing, etc. ..	2,250
Cotton spinning, sizing and weaving ..	6,195
Rope, twine, and other fibres	621
Wool carding, spinning, etc.	223
Silk spinning and weaving	201
Dyeing, bleaching, printing, etc. ..	457
Working in leather	422
Carpenters, turners, etc.	3,885
Basket makers, etc.	2,329
Blacksmiths, workers in iron, etc. ..	1,589
Workers in brass, copper and bell metal ..	665
Potters and makers of earthenware ..	2,852
Brick and tile makers	222
Manufacturing and refining of vegetable oils	1,437
Grain parchers	956
Sweet-meat and condiment makers ..	740
Boot, shoe, sandal, etc., makers ..	4,141
Lime burners, cement workers, etc. ..	2,708
Jewellers and ornament makers ..	3,115
Other miscellaneous industries ..	3,303
Total ..	50,136

Of these, 15,527 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement

gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund.. ..	3	3	932	903
Textiles	5	5	5,666	6,643
Engineering	2	2	50	80
Chemicals, dyes, etc.	10	21	613	857
Paper and printing	..	1	..	11
Seasonal factories : Cotton gins and presses	129	112	8,266	6,911
Total ..	149	144	15,527	15,405

14. The investigator, Mr. N. M. Joshi, spent 18 days and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The investigator interviewed handloom weavers at Parola, Nasirabad, Kasode, Erandol, Faizpur, Yawal and Dharangaon. The general impression gathered by him from these interviews is that the industry is decaying in the district, even the number of looms showing a decline. At Parola the weavers interviewed had fly-shuttle looms. The weavers there are mostly producing *sarees* and *khans* and to a lesser extent *pagotas*. The *sarees* woven are mainly of *maheshwari* design and of the types known as *chandrakala, rasta, gunji, pophali, surli* and plain. The yarn used is 26s, 32s and 40s; mercerised yarn of 2/64s and 2/84s and artificial silk of 2/120s. The *sarees* are sold locally and in the neighbouring markets, and sometimes at fairs at Amalner, Sarangkhede, Chorwad, etc. The sale price of the *sarees* varies from Rs. 2-12-0 to Rs. 4-0-0 for those with real silk borders from Rs. 2-4-0 to Rs. 3-0-0 for those with artificial silk borders, and from Rs. 1-12-0 to Rs. 2-0-0 for those with mercerised yarn borders. In each case an additional eight annas are charged for those *sarees* that have designs or squares on the body. The investigator estimates the average earnings of the weavers at this place to be between Rs. 8 to Rs. 12 a month. Besides

sarees, *pagotas* are also woven by some of the weavers. These are woven from yarn of 60s or 80s and real or artificial gold thread. The length of *pagotas* varies from 12 yards to 30 yards, but the breadth is uniformly 12". The cost of preparing a superior 30 yards *pagota* is reported to be about Rs. 2-2-0. The details are as follows :—

	Rs.	a.	p.
Yarn	1	4	0
Gold thread	0	10	0
Warping, wefting, etc.	0	4	0
	2	2	0

The sale price is reported to be Rs. 2-8-0 each. That gives a wage of 6 annas for weaving one *pagota*. And, as a weaver is credited with weaving three *pagotas* a week, it gives an income of Rs. 1-2-0 a week or about Rs. 4-8-0 a month. Besides these, inferior types of *pagotas* from the cut-warps from the mills, are also produced. These are mostly of 12 yards in length and cost about 10½ annas to prepare; they are sold for 13 annas to 14 annas each. The investigator states that a weaver can prepare four *pagotas* of this type during a week. That would give the weaver engaged in weaving the inferior *pagotas* a weekly income of 10 annas to 14 annas each. These pagotas are sold in the villages round about Parola. The investigator states that formerly the weavers used to work on contract basis, supplied the dealers their requirements and earned better profits, but due to depression this system is no longer in force. Many of them have now become independent weavers and they are all reported to be very badly off and most of them are said to be in debt. The investigator reports that recently *khaddar* weaving on an organised basis has been started at Parola and has brought much relief to the weavers. The weaving of *khaddar* is also reported to have improved the market of *khans* and *sarees*. The suggestions regarding the removal of the weavers' grievances at Parola, are mainly about cheaper supply of raw materials, better marketing facilities, training in producing coating and shirting cloth and the need for restrictions to be imposed on machine-made products.

16. At Nasirabad, there are reported to be roughly 400 looms, most of which are fly shuttle looms. All the weavers produce *sarees*. *Patals* of different patterns are said to be produced only recently. The yarn used is of 20s, 32s and 40s. Mercerised yarn of 2/64s or 2/84s, art silk and real silk are used for borders. Among *sarees*, the *garbhareshmi* or the silk-bordered *saree* is of the highest quality and is sold for Rs. 7 each. The other types are sold for Rs. 2-8-0 to Rs. 5 each according to quality. The *patals* which are a recent product fetch Rs. 2-8-0 to Rs. 2-12-0 each. The *sarees* are sold in the weekly markets and also exported to places like Jalgaon, Jamner, Nandre, etc. The investigator estimates the earnings of weavers in this place to be between Rs. 4 and Rs. 6 a month. The

economic condition of these weavers is in no way better than of those at other places.

17. At Kasode, Erandol and Yawal, there are 20, 40 and 30 looms respectively, while at Faizpur and Dharangaon the number of looms working are estimated at 300 and 360 respectively. *Sarees* are the principal products in these centres though *khans* (bodice cloth) are also produced. The main types of *sarees* produced are *maheshwari, mansuri, nati* and *narali.* The yarn used is of the 20s, 32s and 40s varieties and silk or mercerised yarn is used for borders. The sale price of *sarees* varies from Rs. 1-12-0 to Rs. 7-0-0 according to quality and design. The earnings of the weavers are estimated on an average to be Rs. 4 to Rs. 7 per month per loom. At some of these centres, the weavers work on wage basis for the dealers. The economic condition of the industry is none too good. In fact, the number of looms is said to be continually decreasing.

18. The grievances put forth by the weavers at the different centres are more or less the same, the main grievance being the competition of powerlooms and mills, and all the weavers are agreed in their demand for some restrictions on production by the powerlooms and mills. They also suggest that Government should supply yarn at cheaper rates, train them in new designs and in producing other kinds of cloth, and afford facilities for extension of markets.

Powerloom Weaving.

19. At Amalner, the investigator visited a newly started powerloom factory. It is fitted with ten looms but only six are reported to be working and producing *patals.* The yarn used is 40s, 44s and 60s. Besides cotton yarn, mercerised yarn of 2/64s and 2/84s ; art. silk of 150s and 152s, and Bangalore silk are obtained from Bombay, while the dyed yarn is obtained from Malegaon. There are eight men working in the factory, of whom six are weavers, one a jobber and one an unskilled labourer who helps in warping and other miscellaneous duties. The weavers are said to be working for ten hours a day and are paid on piece-work basis at the rate of 5 annas per *patal.* The monthly output of *patals* is 675 or on an average about 4 *patals* per loom per day. The sale price of the *patals* varies from Rs. 2-14-0 to Rs. 3-2-0 each. Details regarding costs of different types of *patals* are not available, but the cost of the Rs. 3-2-0 variety is stated to be about Rs. 2-12-0. A part of the output to the extent of 80 *patals* a month, is reported to be sold locally, while the rest are exported to Khamgaon, Khandwa, Amalner and Akola.

Zora Weaving.

20. The investigator reports that this industry is localised at Kasode for the last 125 years. Till recently, the industry is reported to have been self-sufficient, the yarn being spun locally by the *momin* women from local cotton and the *zoras* woven by weavers and sold in the different

districts. Now with the introduction of mill-spun yarn, the yarn dealers are reported to have obtained control over the industry, and the weavers have lost their independence. These dealers are also said to be responsible for the increase in the number of looms.

21. There are reported to be only about 15 to 20 independent artisans and all the remaining weavers are said to be bound to sell their output to the merchants who supply them their raw materials. The price of yarn supplied on credit by these merchants is stated to be 2 annas more per 10 lbs. than the usual market price and the weavers are required to pay very high interest on this price. When the finished *zoras* are brought to the merchants, these charges are first deducted from the sale price and the balance is given to the weaver.

22. The usual products woven by the weavers are white and coloured *zoras*, *zuls* and *chawals*. It is said that there has been no improvement either in the designs or in the methods of work. The yarn used is of 2s and 4s. There are three yarn dealers who supply yarn to most of the weavers. The total imports of yarn are estimated at about 700 bales (of 400 lbs. each) a year. The cost of preparing a *zora* (4 yards × 1½ yards) is reported to be Rs. 3-7-0 and of weaving a *zul* (1½ yards × 1 yard) about Rs. 2-4-0, and these are said to be the prices at which the *zoras* and *zuls* are hypothecated to the dealers. The weavers get a wage of 12 annas per *zora* or *zul*. On an average the output per loom is estimated to be 6 *zoras* or 6 *zuls* per week, and as two men are required to weave the articles, the earnings per weaver come to about Rs. 2-4-0 per week. The products are sold in the weekly bazars and also exported to the Central Provinces, Berar, Khandesh, etc. Among the weavers who were interviewed by the investigator at this place was one who came from Cawnpore and wove *dhurris* of a different type than *zoras*. He is said to be the only man producing that type of *dhurri* at Kasode. He works for a merchant. The cost of weaving 50 *dhurris* is stated by him to be about Rs. 40 against their selling price of Rs. 75. The merchant thus gets about Rs. 35 per fifty *dhurris* out of which he pays Rs. 14 as wages to the weaver. The time required for weaving 50 *dhurris* is reported to be about a month. Thus the average income of the artisan comes to about Rs. 14 per month.

Calico Printing.

23. At Faizpur, there were formerly about 200 houses which carried on this industry. But the industry has decayed due to a change in taste. To-day there are only 5 or 6 houses which are engaged in calico printing. Instead of the indigenous vegetable dye, cheap alizarine dye is used at present. The cloth used is mostly mill-made and the types of production are *razai*, *pasodi*, *odhani*, *phadki*, etc. A good part of this product is used by the agriculturists in the surrounding villages. The weekly output of each house is estimated at 32 pieces of 5½ yards each. The artisans get an income of Rs. 4 to Rs. 5 per family per week. They complain against the keen competition from *dhurris*, rugs, etc.

The following suggestions have been made for the improvement of the industry :—

(1) that Government should open a calico printing school in Khandesh which would give the artisans adequate training in new designs and methods ;

(2) that the artisans should be supplied with new designs and wood blocks for printing ;

and

(3) that Government should arrange for marketing facilities and cheap finance.

Dal and Flour Industry.

24. At Jalgaon, the investigator interviewed a factory owner engaged in crushing grams into *dal* and flour. The supply of gram required for his production of *dal* and flour, is obtained from the United Provinces and Central India. His purchases at the present time are estimated at 7,000 bags against 11,000 bags a few years back. The crushing machines and the oil engines altogether are reported to have cost nearly Rs. 12,000 and the annual repair charges thereon are stated to be about Rs. 700. The factory works for 24 days in a month, and the daily output of *dal* and flour is reported to be 50 bags and 25 bags, respectively, each bag weighing 2½ maunds. A bag of gram is said to yield approximately about 3/4ths bag of *dal* or half a bag of flour. The factory works for six months in a year. The produce is exported to all parts of the two Khandesh districts, to Berar and to the Central Provinces. As the railway freights are reported to be heavy, the owner exports his produce in motor lorries which charge 5 per cent. lower than the railways. There are in all 11 persons working in the factory who work for 10 hours and get 6 annas a day. The owner reports that he is working at a loss for the last three years, though his is the only factory at Jalgaon.

Oil Mills.

25. According to the Factory Report for 1938, there are 21 oil mills in the district. The investigator interviewed owners of four oil mills : two at Jalgaon and two at Amalner. All these mills crush groundnuts. Only one of these four mills uses rotary *ghanis*, while all the other three use expeller machines. The oil is consumed locally and also exported to places as distant as Lyallapur, Cawnpore, etc. One of the owners stated that he used to export direct to foreign countries but on account of the scarcity of clean iron drums, the oil sent by him could not remain pure and that naturally affected the demand for his oil. He further stated that the oil-cakes produced by him were also not up to the standard required in the foreign markets. He has, therefore, discontinued direct export and now sells instead to wholesale traders in India. Almost all the owners of oil mills complain about the quality of groundnuts which, it is stated, contain dust and mud.

Oil *Ghanis*.

26. The investigator interviewed artisans engaged in pressing oil-seeds on country *ghanis* at Yawal and Faizpur. Yawal was once known as a centre of vegetable oil industry. Some years back there were reported to be about 40 oil *ghanis* at Yawal whereas today there are only two. The industry is said to have been hard hit by the competition of mill pressed oil. Most of the *ghani* owners have now become mere retailers of mill-oil while some of them have taken to manual labour. The artisans work their *ghanis* only when the price of the raw material is low or whenever oil-seeds are brought to them for pressing on payment of wages.

27. At Faizpur also the *ghani* oil industry is decaying. The investigator was informed that there were about 50 *ghanis* at this place some years back but since the establishment of oil mills, the industry is said to have suffered heavily. Today there are only 4 or 5 *ghanis* which work for about ten months in a year. Here also, the artisans find difficulty even in meeting their cost of production by selling their oil and oil-cakes at market rates. Not only have the oil mills lowered the selling price of oil but it has become necessary for the artisans to sell their *ghani* pressed oil at still cheaper rates as otherwise they find no market for their product.

28. The main reason for the decay of the *ghani* oil industry at Yawal, Faizpur and other places in the district is stated to be the fact that the mill oil looks purer than *ghani* oil. The other handicaps against the *ghani* oil are that the percentage of oil extracted from *ghanis* is somewhat low and the oil extracted is not properly filtered. The artisans suggest that Government should analyse both mill oil and *ghani* oil and then should demonstrate to the public, the advantages of consuming *ghani* oil. They also want to be supplied with proper filters which can be worked with hand so that they can make their oil more pure. They agree that their *ghanis* are all of the old pattern and useless for competing with the mills, and desire that some improvements should be carried out in the village *ghanis* and their crushing power increased. Another reason why they cannot compete with mills is that they make their purchases of raw materials in retail whereas the mills have their agents who purchase their supplies of oil-seeds wholesale and cheap. They, therefore, suggest that Government should arrange for the supply of oil-seeds to them at cheap rates. The artisans consider that there is no future for their industry unless some steps are taken by which the mill competition can be minimised.

Iron Manufactures.

29. The investigator visited an important iron works at Jalgaon. This factory manufactures spare parts of oil and steam engines, boilers, other machinery parts and iron furniture. The yearly output is estimated at Rs. 7,000 to Rs. 8,000. All the raw materials are purchased at Bombay. There are about ten men engaged in the industry of whom four are

wage-earners. The work at the factory is stated to be brisk during the months of September to February, during which period the factory has for some days to work even by night shifts. During the other six months demand is slack and some of the machines have to remain idle for want of work. The Managing Agents complain of keen competition from other Indian and foreign companies, particularly in the manufacture of spare parts. They are, however, confident of improving their production and taking to other kinds of manufactures if sufficient share capital is forthcoming or if Government comes to their aid by supplying them with the necessary finance.

Leather Industry.

30. The investigator reports that the village *chamars* are losing their markets and that their economic condition is very bad. They get their tanned leather in the weekly markets where the village tanners bring their leather for sale. At Neṛi in Jamner taluka where the investigator interviewed some *chamars*, only village *jodas* are prepared. One of the *chamars*, who has nine members in his family, prepares 8 *jodas* a week which cost him Rs. 7 and are sold for Rs. 10. Another family prepares 6 pairs a week but the *jodas* prepared by this family are of an inferior type, which cost Rs. 3-8-0 for 6 pairs and are sold for Rs. 5. All the products are sold in the local bazar and sometimes in the neighbouring towns. The earnings of the *chamars* are reported to have fallen by about 50 per cent. They have no skill and are not able to prepare either shoes or better type of *jodas*. They depend mostly on the agriculturists for demand. But even the agriculturists are now said to prefer the cheaper *champals* made of worn-out rubber tyres. The *gavhali* system under which the *chamars* undertook work for the agriculturists in exchange for a fixed quantity of corn is reported to have been replaced at most places by the cash system. At some places where the system still prevails, the *chamars* are reported to be getting 2 *payalis* of corn per plough per year. In the agricultural season, most of the village *chamars* work as labourers.

31. At Amalner it is estimated that there are about 15 families of shoe-makers who are said to have come there from Surat and Kathiawar. These families do not prepare *champals* but specialise in shoes and slippers. They get their supply of leather from Bombay. Each family has its own shop and the total cost of equipment including that of the sewing machine is reported to be approximately Rs. 300. The cost of preparing a pair of slippers and a pair of shoes is stated to be Rs. 1-6-0 and Rs. 1-12-0 respectively. The usual sale price for a pair of slippers is Rs. 1-12-0 and for a pair of shoes Rs. 2-4-0. The shoe-makers thus seem to be earning about 6 annas on each pair of slippers and 8 annas on each pair of shoes, as their wages. The weekly output varies from 6 to 15 pairs according to the number of persons in the family or the number of piece-workers engaged. They usually sell their products locally and to petty dealers from neighbouring villages. There is a general complaint about the competition from cheap rubber and canvas shoes from Japan and

from leather shoes and slippers manufactured by large scale factories. According to them their shoes are better than the machine-made ones but there is no demand for them as the competing products are cheaper. The shoe-makers want Government assistance in training them in making new products and adopting new designs, in extending their markets and in meeting their capital requirements.

32. Amalner is reported to have been well-known for its production of leather harnesses and *mots* (water carriers). The investigator was told that some years back about 1,000 sets of harness and 500 *mots* were prepared annually at this place. Today, the production does not exceed 200 harnesses and 100 *mots* a year. The decay of this industry is said to be due to the rapid development of motor transport and the increasing use of iron water carriers. The cost of preparing a set of harness is Rs. 18 while that of a *mot* Rs. 15 and they are sold for Rs. 20 and Rs. 16 respectively. The artisans get on an average an income of Rs. 15 per month. They are reported to be keen in learning new methods of manufacture.

Paper-making.

33. Some years back, Erandol was a well-known centre of hand-made paper industry and there were stated to be about 15 *karkhandars* engaged in producing nearly 3,000 *gaddies* (of 240 sheets each) annually. There was a large demand for Erandol paper from the Central Provinces, Berar and parts of Deccan. The industry is at present in a depressed condition owing to fall in demand and there are today four *karkhandars* engaged in the business. There are also a few other people but these take to this industry only in the brisk season and prepare about 20 to 25 *gaddies* each during that period. The industry is carried on only for six months in a year, firstly due to the seasonal availability of water and secondly due to the seasonal nature of the demand. The *karkhandars* employ about ten men in their *karkhana* and the work of sizing and polishing is given to women workers who do the work in their own homes. Wages are reported to be as follows :—

Pulp-makers	.. 3 rupees per maund (40 seers).
Paper-maker ..	.. Annas 12 per *gaddi* (big size paper) or annas 8 per *gaddi* (small size paper).
Paper-setter ..	.. Annas 6 per *gaddi*.
Sizer ..	.. Annas 5 per *gaddi* (both sides).
Finisher ..	.. Annas 2 per *gaddi*.
Polisher ..	.. Annas 12 per *gaddi*.

The paper is manufactured in three different sizes of $26\frac{1}{2}'' \times 24''$, $23'' \times 22''$ and $20'' \times 18''$. The details of cost of preparing one *gaddi* (240 sheets)

of the first type of paper which is known as *bahadurkhani* paper, are given as follows by one of the *karkhandars* :—

	Rs.	a.	p.
Waste paper (12 seers)	1	15	0
Washing soda ½ seer	0	2	0
Soap 10 seers	2	8	0
Wages	3	3	6
	7	12	6

The sale price of this one *gaddi* of *bahadurkhani* paper is stated to be Rs. 10. The cost price and the selling prices of the other two kinds of papers are reported to be as below :—

	Cost price.	Selling price.
Medium size (23″ × 22″) ..	Rs. 6 to Rs. 6-8-0	Rs. 7 to Rs. 7-8-0
Small size (20″ × 18″) ..	Rs. 4	Rs. 5

The output of each *karkhana* is reported to be about 2 *gaddies* during the season. Owing to the competition of cheap mill-made paper, the demand for this paper has fallen, though hand-made paper is known for its durability. Many of the artisans are reported to have left this industry and taken to *bidi*-making. The *karkhandars* state that their industry can improve only if Government gives patronage to hand-made paper.

Bangle Industry.

34. It is stated that about 30 years back bangles were being prepared at Nasirabad, Neri, Palaskhede, Palner, Paldhi, etc. To-day, except for a few families at Nasirabad who carry on the industry, there are none in the other centres. All those artisans are now reported to have turned into retail sellers of cheap foreign bangles. Some years back the industry at Nasirabad was carried on, on a large scale and about 250 men were engaged in about 15 to 16 *karkhanas* and an equal number were engaged as outworkers for some of the processes. Glass was at first prepared in the *bhattis* locally made, but later on it was imported from the United Provinces. But to-day there is only one *bhatti* at this place, owned in common by about 10 persons. Glass is prepared from broken pieces of bangles. The bangles are sold for 8 to 12 annas per thousand. Most of them are purchased by a local dealer who sells them again with a commission of half an anna per thousand. The only demand for these bangles comes during the marriage season when due to the sentiment that only hand-made bangles should be used on such auspicious occasions, brides are made

to wear these bangles. As the local industry keeps them engaged for only a month, most of the artisans maintain themselves by selling foreign bangles during the remaining period of the year. The investigator reports that at places other than Nasirabad, the artisans have forgotten the processes of manufacturing bangles. The artisans are said to be very conservative and not enterprising enough to take to new methods without Government assistance. It has been suggested that Government should train them in the manufacture of the fashionable and finer type of bangles.

Preparation of Wooden Combs.

35. At Amalner there are reported to be three houses engaged in this industry. Between these three houses there are only four artisans. The combs are prepared from black *sisal* wood which is imported from West Khandesh. The annual requirement of wood is estimated to be worth about Rs. 120 to Rs. 125. Each artisan prepares about 50 combs a day or 250 a week. The equipment consists of a simple saw worth about Rs. 10 and other small tools costing not more than Rs. 8. The cost of preparing 250 combs is stated to be as follows :—

	Rs.	a.	p.
Wood	2	0	0
Paint	0	2	0
Total ..	2	2	0

These are sold in the markets of Chalisgaon, Bhadgaon, Pachora and Parola and fetch about Rs. 4 for 250 combs. Each artisan and his family thus get about Rs. 2 as their wage per week. It is reported that the prices have now fallen very low and have affected the earnings of the artisans. The combs are of a rough quality and the artisans state that they are not able to prepare finer types of combs. They, however, desire that they should be trained in producing combs of superior quality.

Carpentry.

36. The investigator interviewed a few carpenters at Amalner, Neri and Erandol. Most of them do work for the agriculturists in exchange for corn, the agriculturists usually paying about 48 to 60 *payalis* of corn per year. For other than agricultural work, the carpenters are paid in cash. Some of the carpenters in Amalner also make furniture. All these artisans are now reported to get a much lower return from their occupation than they used to get some few years back. The local carpenters complain of the competition from Marwari and Kathiawari carpenters who visit their district and carry out most of the building work that is available in the district.

Blacksmiths' Work.

37. The investigator interviewed some blacksmiths in four of the villages in the district. These men undertake repairing of agricultural implements. Even in this work, they are meeting competition from itinerent blacksmiths who visit the different villages and undertake the work at much cheaper rates. The women folk of the itinerent artisans help the men in their work while the women of the village artisans do not help their men folk who have to employ assistants on wages to help them. Some of the blacksmiths, therefore, content themselves with the minor work of shoeing the bullocks. Others who are better off undertake the manufacture of carts and sell them locally or at village fairs. In the case of the blacksmith interviewed by the investigator, the earnings from the manufacture of carts amounted to about Rs. 25 to Rs. 30 per month. In some of the villages, the blacksmiths are paid for repairing agricultural implements, etc., in kind and the blacksmiths complain that though their expenses have considerably increased, these payments in kind fixed years ago, are not being increased. The general impression gathered by the investigator is that the income of the village blacksmith has decreased and that he is no longer able to maintain himself, except in a few cases, on his principal occupation and has, therefore, to take to some subsidiary occupation such as agriculture or carpentry.

Pottery.

38. A few families of potters were interviewed by the investigator at Patonde in the Amalner taluka. These potters work for the agriculturists in exchange for corn and also prepare pots for cash sale in the weekly markets. It is reported that they get their supply of clay free of costs. They have, however, to pay cart hire at the rate of 4 annas per cart. Fuel is collected from the surrounding areas and the village refuse is also utilised. Each family has its own kiln. The work is carried on throughout the year except during the monsoon months and every week about one *bhatti* or about 250 pots are prepared. Of these 10 to 12 per cent. is lost through breakages and the good ones are sold in the weekly bazars. Each family is reported to make about 8 to 10 annas per week from the sale of pots. These potters work during the agricultural season as labourers and earn about one and half annas per day. Though most of the potters know how to make bricks, they are not doing so, as it is stated that clay available in the localities is not suitable for bricks.

Basket-making.

39. The investigator interviewed a few basket makers at Patonde in the Amalner taluka. They use bamboos for preparing baskets and *tattis* and get their supply of raw material from Amalner and Dharangaon at 2 annas per bamboo. Out of one bamboo, the workers can prepare nearly four baskets while a *tatti* requires two bamboos. Each worker

can prepare three to four baskets in a day and a *tatti* in two days. The baskets are sold for nine pies each and *tattis* for six annas each. The workers sell their products in the weekly bazars at Amalner and the neighbouring towns. The average earnings of a family are estimated to be about 8 annas to 12 annas per week. All the workers, do agricultural work during the agricultural season and also all kinds of odd jobs during other times in addition to their occupation of basket-making.

Possibilities of New Industries.

40. The district has very little forest or mineral wealth. It is stated that the red alluvial soft rock formations found along the Tapti bank are locally believed to be suitable for high class pottery but this needs detailed investigation. The district contains many vegetable materials from which dyes can be prepared and in fact in former times, the district of East Khandesh had a flourishing dye industry. Similarly some of the decaying cottage industries, like hand-made paper manufacture, glass-bangle making, etc., can be developed in the district. There is a considerable area under fruits and it should be possible to develop a fruit canning and preserving industry. The Department of Industries has actively assisted in the commercial utilisation of limes in the district for the manufacture of lime-oil and at Utran, lime-oil is being manufactured by one of the plantation growers.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

WEST KHANDESH

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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WEST KHANDESH.

Position and Area.

The district of West Khandesh lies between 20° 38′ and 22° 2′ north latitude and 73° 35′ and 75° 17′ east longitude and covers an area of 6,401 square miles. It is bounded on the north by the Narbada river; on the north-east by the Barwani State and the Holkar's Territory; on the east by the district of East Khandesh; on the south by the Nasik district and on the west by the Baroda Territory and States of Rewa Kantha Agency.

Physical Features.

2. The district is hilly and rugged except where wide black soil plains extend on either side of the Tapti and its chief tributaries. North of the Tapti and between it and the Narbada lie the Satpuras. The aspect of West Khandesh is very varied. The Tapti plain of Shirpur is rich while the northern parts are wild, hilly, *Bhil* country. Dhulia is broken by low hills. The valleys are well wooded. Shahada is one of the richest black soil plains of the whole district. The northern portions of Taloda and the southern portions of Nandurbar talukas are very hilly. Between these hilly tracts wide black soil plains extend on either side of the Tapti and its chief tributaries.

Climate and Rainfall.

3. The average rainfall of the district is about 23 inches and is less than in East Khandesh, though more certain, except in portions of Sindkheda taluka where the rainfall is generally precarious. The climate is generally fair, though in places near the forests it is unhealthy, damp and malarious.

Population.

4. According to the Census of 1931, the district has a population of 7,71,794 persons of whom 6,71,386 live in rural areas consisting of 1,484 villages while the remaining 100,408 persons live in 8 towns. The more important towns in the district are:—

	Population.
Dhulia	39,939
Nandurbar	16,919
Shirpur	10,938

It will be noticed that the proportion of urban population to the total population is about 14 per cent.

The total number of principal workers in the district, according to the 1931 Census, is 259,629. The occupational distribution of this number is given below :—

Exploitation of animals and vegetation ..	208,214
Industry	20,855
Transport	1,495
Trade	12,205
Public Force and Administration	5,544
Professions and Liberal Arts	3,397
Persons living on their income	382
Domestic Service	3,844
Insufficiently described occupations	1,843
Unproductive..	1,850
Total ..	259,629

The industrially occupied population of the total principal workers is about 8 per cent. But it should be pointed out that the 208,214 persons shown under exploitation of animals and vegetation are not all employed in agriculture. That figure can be further analysed into the following sub-divisions :—

Cultivation	198,931
Forestry	3,267
Stock raising	5,644
Fishing and Hunting	372
Total ..	208,214

It will thus be seen that 9,283 persons are engaged in forestry, stock raising and fishing and can be taken to be industrially occupied for purposes of this survey in addition to the 20,855 persons shown as engaged in industries according to the Census classifications. The total number of the industrially occupied persons comes, therefore, to 30,138 or about 12 per cent. of the total principal workers in the district.

Health and Medical Facilities.

5. Some indication regarding the health conditions of the district is provided by its vital statistics which show that the mean ratio of births for the five years ending 1937 was 50·01 which was the highest for the

whole of the province. The mean ratio of deaths for the quinquennium ending 1937 was 28·26 yielding a survival rate of 21·75 which was the highest for the province. It would seem, therefore, that health conditions are good in this district.

There are two hospitals in Dhulia—one Government and the other maintained by a mission. There is also a Child Welfare Centre at Dhulia. In other parts of the district there are ten dispensaries of which five are maintained by Municipalities, four by the District Local Board and one by Government. There are 43 doctors in the district, including 23 in Dhulia town. The proportion of doctors to population comes to one for 36,600 persons.

Literacy and Educational Facilities.

6. According to the Census returns for 1931, 45,420 persons are shown as literates. The percentage of literacy comes to only 5·8 which is the lowest in the whole of the province.

The educational facilities in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary Schools	497	47,304
Secondary (including lower secondary and English teaching) Schools	14	2,169
Industrial, Commercial and Agricultural Schools	2	126

Of the 1,484 villages in the district, only 344 villages had schools in them.

Transport Facilities.

7. The Dhulia-Chalisgaon branch of the Great Indian Peninsula Railway line which traverses the district over a short distance, and the Tapti Valley Railway which runs from east to west, have led to a considerable increase in the commerce and traffic of the district. The most important roads are : (1) The Bombay-Agra Road which runs from Malegaon in the Nasik district to Dhulia, Shirpur and Palasner in this district, (2) Dhondaicha-Shahada-Khetia Road, and (3) Nandurbar-Nizampur Road and (4) The Navapur-Borzar Road. The total length of roads maintained by Government and District Local Boards is not separately available for this district but for both East and West Khandesh districts the mileage is 1,002 miles of metalled and 733 miles of unmetalled roads. According to the reports received from Government officers the road mileage in the district comes to 39·5 per 100 square miles of area.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 3,480,859 acres of which 1,702,251 acres constitute the gross cropped area. The area under forests is very large, being 1,333,516 acres, while area not available for cultivation is about 275,452 acres. Current fallows constitute 120,829 acres, while culturable waste or land which could theoretically be cultivated, measures about 164,601 acres.

The following table gives the details of the area under different kinds of crops in the year 1937-38 :—

	Area in acres.
Rice	50,230
Wheat	125,391
Jowari	265,181
Bajri	295,679
Ragi	25,590
Maize	9,914
Gram	49,613
Other food grains and pulses	180,245
Linseed	2,438
Sesame (*Til*)	13,336
Rape and Mustard	660
Groundnut	104,341
Castor seed	10,066
Other oil-seeds	10,058
Condiments and spices	8,798
Sugarcane and other sugars	901
Cotton	535,696
Other fibres	6,426
Drugs and Narcotics (including tobacco) ..	260
Fodder	1,255
Fruits and Vegetables	6,153
Miscellaneous Crops	20
Total ..	1,702,251

Cotton is the most important crop of the district. It occupies about 31 per cent. of the total cropped area and is especially important in Dhulia, Sindkhed, Shirpur and Shahada. Jowar, bajri and wheat are widely grown while rice is grown in the western-most talukas. Among oil-seeds, ground-nuts and sesame are the important crops.

The area under fruits and vegetables was 6,153 in 1937-38. More details under this important head were obtained from the Department of Agriculture which supplied the following information in respect of 1938-39 :—

	Acres in 1938-39.
Vegetables—	
Sweet potatoes	788
Carrot	115
Onions	658
Others	141
Total ..	1,702
Green Vegetables—	
Fenugreek	185
Edible hibiscus	738
Musk melon	722
Water melon	442
Others	1,363
Total ..	3,450
Fruit trees—	
Plantains	495
Mango	179
Lime	49
Sweet Lime	66
Orange	86
Guava	160
Papaya	23
Others	114
Total ..	1,172
Total, Fruits and Vegetables ..	6,324

Though the area under fodder crops is only 1,255 acres, the district of West Khandesh is an important cattle breeding district. In the country bordering on the Satpuras in the Taloda, Shahada and Shirpur talukas, there are excellent facilities for cattle breeding and extensive grazing grounds, both within and without forest boundaries which contain good varieties of grass. There are many professional breeders in this tract viz., the Vanjaris, Khillaris, Bhils and Rajputs, who keep herds of cattle. Apart from the professional breeders, the ordinary cultivators of these tracts also keep a good number of cattle which bring them some profit. The bulk of the cattle are of an intermediate breed between the Malvi and Khillari. According to the Cattle Census taken in 1934–35, the details of live-stock in the district are as follows :—

Bulls and Bullocks (breeding, working and young stock)				..	237,311
Cows	(	do.	do.)	..	149,151
Bull Buffaloes	(	do.	do.)	..	13,169
Cow Buffaloes	(	do.	do.)	..	67,773
Sheep and Goats		..	..	..	153,108
Horses and Ponies		..	..	..	12,913
Donkeys		..	..	..	3,735

Of these 116,383 are milch cattle consisting of 76,837 cows and 39,546 cow-buffaloes.

Survey of Resources : Minerals.

9. The district has little mineral wealth. Trap rock is found everywhere and is useful for ordinary building purposes and road mending. Similarly gravel, useful for road purposes, is also found everywhere. Nodular limestone known as *kankar* is found in all black soil and yields excellent lime. Clay useful for brick making also occurs in all parts of the district.

Survey of Resources : Forest Products.

10. This is the second largest forest district in the Province, the total area under forests being 1,333,516 acres in 1937–38. For purposes of forest management the two civil districts of East and West Khandesh have been divided into three divisions : the East Khandesh,

the North Khandesh and the West Khandesh. Roughly speaking, the North and West Khandesh divisions may be taken to represent together the civil district of West Khandesh. The following table of receipts from different forest products illustrates the importance of the district from the point of view of forest resources :—

	North Khandesh.	West Khandesh.
	Rs.	Rs.
Timber	33,055	1,15,760
Firewood and charcoal ..	7,084	3,250
Bamboos	1,255	2,357
Grazing and fodder grass ..	43,080	31,379
Other minor products	8,469	12,601

The timber available is not of a high order though teak, *tiwas*, *khair* and *anjan* trees are found in these areas. These trees do not grow to a large size and the timbers are used for building houses and small bridges and making furniture and agricultural implements; crooked timber is used for fuel and charcoal. The forests in the west and north-west parts of the district are reported to yield good timber, a large proportion of which is exported to Surat and other places. From the reports received from the officers of the Forest Department it seems that timber from an area of 200 square miles only is being exploited at present, most of the remaining area being inaccessible or treated as protective.

The *anjan* tree abounds in parts of the Satpuras and in the hills south of Dhulia. The timber of this tree is reported to be excellent, of a dark red colour and to take a good polish. *Babul* is the commonest of Khandesh trees. The wood is used for house and field purposes as well as for fuel. The bark is useful in tanning, yields a yellow dye and its sap is a useful gum. Another common tree is the *Moha* or *Mhowra* (*Bassia latifolia*); its chief value lies in the pulpy bell shaped flower which when dried is eaten by the Bhils and is distilled into liquor; the wood of the tree is hard and lasting; the seed yields oil useful for food and burning and also for skin diseases; the leaves and bark make useful embrocations. The *moha* or *mhowra* tree is thus one of the most valuable of Khandesh trees but as it grows in the wild forests, most of the produce is wasted. *Salai* (*Boswellia Serrata*) is another useful tree which grows abundantly in all trap hills. It is conspicuous by its white and scaly work which is supposed to have yielded frankincense but at present no substance is

extracted from it. The wood which is full of gum and burns readily is sometimes used for torches. Its flowers and seed nuts are eaten by the Bhils. The gum exudes in abundance but no use seems to be made of it. The *palas* (*Butea frondosa*), tree which is also one of the commonest of Khandesh trees is a commercially valuable tree. Its leaves are used as dinner plates and are in great demand. From the stem of the tree, kino gum is extracted. The flowers yield a valuable dye and the root and bark, an excellent tough fibre. The juice of the tree is said to be a favourite with the lac insect. The wood of the tree is strong and tough and makes good charcoal.

The forests also contain varieties of soft wood like *sawar*, *kakad*, *pangara*, *kuda*, etc., which are mostly used for fuel and charcoal making and are reported to be useful for match-making. Among the minor forest produce may be mentioned *apta* and *temburni* leaves used for *bidi*-making, *ghat-bor* fruit, *chilhar* and *tarwad* bark used for tanning purposes; and *mhowra* seed and *rosha* grass from which oil is extracted.

Survey of Resources: Power.

11. There is only one electric supply company working at present in the district: The Dhulia Electric Supply Company. This company generates more than 309,000 units of electricity of which nearly 269,000 units are sold, including 146,500 units consumed for industrial purposes. Another company has recently been started at Nandurbar.

Survey of Resources: Capital.

12. Some indication of the capital resources of the district is provided by the number of co-operative credit societies and the postal savings bank accounts. There were 333 agricultural co-operative societies of different kinds in the district with a total working capital of Rs. 31·13 lakhs during 1937–38. The non-agricultural co-operative societies numbered 28 and their aggregate working capital during the same year amounted to Rs. 16·61 lakhs. Besides these, there were 17 post office savings banks in the district with 4,916 accounts current and having a total balance of nearly Rs. 10 lakhs to their credit at the end of 1937–38. During the same year cash certificates to the extent of Rs. 1·7 lakhs were sold in the district.

Industries in the District—General.

13. The principal workers engaged in industrial occupations proper has been estimated at 20,855 according to the Census of 1931. Adding to these, the 9,283 persons engaged in such occupations as forestry, stock-raising and fishing, the total number of persons engaged in

industrial occupations in the district comes to 30,138. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

1. Sawyers	334
2. Tailors, milliners, etc.	1,317
3. Butchers	348
4. Washing and cleaning	620
5. Barbers	1,727
6. Scavenging	223
Total ..	4,569

The remaining 25,569 may be regarded as persons engaged in industries. Their distribution is given below :—

Forest industries	3,267
Stock raising	5,644
Fishing, hunting, etc.	372
Cotton gins and presses	1,406
Cotton spinning, sizing, and weaving ..	2,325
Wool carding, spinning and weaving ..	211
Dyeing, bleaching, printing, etc.	119
Carpenters	2,525
Basket makers	1,082
Blacksmiths	803
Workers in brass, copper and other metals ..	195
Potters	998
Brick and tile makers	193
Rice pounders	100
Grain parchers	295
Sweetmeat and condiment makers	352
Manufacturers of tobacco	434
Boot, shoes, and sandal makers	1,737
Lime burners, cement workers, etc.	1,565
Makers of jewellery and ornaments	1,521
Other miscellaneous industries	425
Total ..	25,569

Of these 7,011 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	1	3	1,562	2,631
Engineering	..	1	..	22
Food, drink and tobacco ..	..	1	..	17
Chemicals, dyes, etc. ..	10	15	354	466
Paper and printing ..	..	2	..	24
Seasonal factories	64	68	5,095	5,404
Total ..	75	90	7,011	8,564

14. The investigator, Mr. N. M. Joshi, spent 15 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on the other data available to the Committee.

Handloom Weaving.

15. At Dhulia the investigator interviewed some independent artisans engaged in this industry. The weavers who were interviewed all weave *saris*. According to these weavers, the total number of looms in Dhulia is about 400. No *karkhana* had, it was stated, more than five looms. The counts of yarn used vary from 20s to 32s cotton, 2/64 and 2/84 for mercerised, to 150s for artificial silk. The yarn is purchased locally.

Though the artisans weave different types of *saris* such as *Ilkal*, cotton ordinary, cotton *Bugadi*, etc., the main type of product appears to be the "Mansuri" pattern. The cost of production varies according to quality and design. The average income per loom comes to between Rs. 7 to Rs. 10 per month. The total output from the Dhulia looms is approximately estimated to be 250 to 300 *saris* per day. The *saris* are sold in the local bazars every day. Some of the dealers also export them to Berar, Central Provinces, and Bombay. The artisans stated that they keenly feel the competition from powerlooms and mills which has compelled them to abandon producing certain types of products, particularly *patals* They also complain about the control of prices by the dealers which had proved very harmful to the weavers. They ask for Government help in : (1) restricting mill production of goods of the kind hitherto produced by them, (2) in removing the price control of the

dealers, and (3) in opening up new markets. The Co-operative Society that is existing is stated to be of not much use to them and they want the District Industrial Association to properly safeguard their interest.

16. There are about 10 shops at Dhulia dealing in yarn on a retail basis. The investigator was informed that the total imports of yarn at Dhulia amount to about Rs. 75,000 to Rs. 1,00,000 every year. The most common counts used are 20s, 26s, 32s, 2/60s, 2/64s, and 2/84s and artificial silk of 120s, 2/120s, 150s, 2/150s. Counts from 60s and above are all Japanese and account for nearly 50 per cent. of the total imports.

The dealers in *saris* purchase the cotton *saris* usually at the following rates :—

Ilkal Rs. 1–8–0 to Rs. 1–10–0 per piece.

Mansuri Rs. 1–8–0 to Rs. 1–10–0 per piece.

Bugadi Rs. 1–8–0 to Rs. 1–10–0 per piece.

These prices are reported to be ruling for the last $1\frac{1}{2}$ years. It is reported that Dhulia has now ceased to be an important centre of hand-loom weaving.

Power-loom Weaving.

17. The Investigator visited two power-loom factories at Dhulia. One had 15 power looms and the other only 5. The count of yarn used varies from 32 to 60 in single yarn and 64 to 80 double in the case of the bigger factory, while the smaller uses yarn of 60s for weft, 2/84s mercerised for warp, and art-silk for borders. The yarn is either purchased locally or obtained from Malegaon merchants. Except weaving for which electric power is used all other processes are performed by manual labour. While dyeing is done by unskilled labourers, winding and warping are done by skilled workers. The bigger factory employed about 32 workers, 10 women and 22 men, who work for about 10 months in a year for 9 hours a day. They are paid wages varying from Rs. 10 to Rs. 35 ; during the slack season they are paid at half these rates. The smaller factory employs about 5 weavers, one worker on warp who works on contract basis and 7 women for weft winding. Details regarding their wages, hours of work, etc., are not, however, available. According to the owner of the bigger factory which has 15 powerlooms, each powerloom cost him about Rs. 800 and the one 7·5 H.P. motor cost him Rs. 200. Repairs and other charges are stated to come to about Rs. 1,000 per annum. The equipment at the smaller factory, on the other hand, is a second hand one, purchased from Ahmedabad ; the cost including the cost of transporting the looms from Ahmedabad is stated to be Rs. 320 each and the annual repairs about Rs. 120 and other expenditure about Rs. 50 per month. The articles manufactured are *patals* and *saris*. The monthly output at the bigger factory is about 1,500 *saris* and about 350 at the smaller. In the months of July and August production is limited, as demand is then very slack. The sale price of *saris* made at the

bigger factory varies from Rs. 1–4–0 to Rs. 2–4–0, while of those made at the smaller which are more fashionable, varies from Rs. 2–14–0 to Rs. 3 each. Complete details regarding costs of their products are not available. The powerloom *karkhandars* complain of the competition from mills and local manufacturers. They want marketing facilities and financial help and favour the establishment of a co-operative society.

Khadi or Coarse Cloth Weaving.

18. The Mahars in the village of Malpur in Sindkhed taluka were making a living from *khadi*-weaving, some three years back. Now due to the depressed condition of the industry, they have left off *khadi*-weaving and taken to agriculture. It is reported that their weekly output of *khaddar* cloth was about 300 pieces of 11 yards each. This was sold locally or at the weekly bazars in the neighbouring towns. Each piece fetched about Rs. 1-8-0 to Rs. 1-12-0 which left them, after paying Rs. 1-4-0 for yarn and 6 pies for sizing the material, about 3½ to 7½ annas per piece. Each family used to weave about 6 to 7 pieces of *khaddar* in a week and earn from Rs. 2-8-0 to Rs. 2-12-0. Their main complaint, now is that they do not now obtain the yarn on credit. As they have no money to buy yarn on a cash basis, they have left off the industry and have taken to agricultural labour which, it is stated, yields them, about 2½ annas to annas 3 per day. The Mahars are of opinion that their industry can be revived if they are given financial facilities for the purchase of yarn.

Calico Printing.

19. This industry is carried on at Malpur and Chirne in the Sindkhed taluka and in Kasare in the Sakri taluka. At Malpur the investigator was informed that about 20 years back there were 40 houses of independent artisans who had complete control over all stages of production from the purchase of raw materials to the sale of finished goods. Now there are only 15 houses engaged in this industry and these rely on the work given to them by the Malegaon dealers, who send them cloth for printing directly from the mills. Some of the well-to-do artisans bring work on contract basis from the Malegaon dealers, the usual rate of such a contract being annas six for 10 yards of cloth. These contract workers have to bear the railway freight and the cart hire charges, for bringing the cloth and returning it to the dealers. It was stated that a cart load contained about 450 pieces and the cost of transporting it came to Rs. 12. In addition, they had to pay an *octroi* duty of Rs. 6 per cart.

The contractor-artisan distributes the work brought by him among some of the families of artisans including his own. The wage for doing the printing work is usually fixed at one anna per piece of 10 yards and that for washing also at one anna per piece. It is estimated that each family completes work on about 32 pieces of cloth per week. It seems,

therefore, that an average family of three workers earn between Rs. 15 to Rs. 20 per month. The contractor-artisan, on the other hand, is reported to be earning, after meeting all expenses regarding transport charges, dyes, wages, etc., a net income of only six pies per piece of cloth. In addition he gets the wages for the work turned out by himself.

20. At Chirne, the industry seems to be more extensively carried on than at Malpur. It is stated that there are about 40 houses of Bhavsars engaged in this industry of whom 5 are independent workers, 4 who work on contract basis and the remaining are wage earners. The independent workers buy cloth from the Amalner or Chalisgaon mills. They usually purchase 30–50 *thans* or pieces of 38 to 40 yards length each and pay Rs. 4 on transport. The price of each piece of cloth varies from Rs. 5 to Rs. 6 and the cost of printing is estimated at approximately Rs. 1-4-0 per piece. The details of this cost as given out by the artisans are as follows :—

	Cost of printing a piece of 38 to 40 yards.
	Rs. a. p.
Washing	.. 0 3 0
Printing charges	.. 0 4 0
Dyeing charges	.. 0 11 0
Sizing charges	.. 0 2 0
Total	.. 1 4 0

The average output per family of independent artisans is reported to be 5 to 6 pieces per week. These finished pieces are sold in the markets of Dondaicha, Shirpur, Sindkheda, Chopda, etc., and the usual sale price obtained is stated to be Rs. 7 to Rs. 8 per piece. The return to the independent artisan is estimated at annas eight per piece in addition to the wages obtained by himself and his family.

21. As in the case of the contractor-artisans at Malpur, the artisans working on contract basis at Chirne also get their work from the Malegaon dealers. The contract rates usually are as follows :—

Rs.	a.	p.	
0	6	0	for a piece of 10 yards (Malegaon *khadi* piece).
1	4	0	do. 40 yards (Amalner *than* type cloth).
1	6	0	do. 40 yards (Large width *Pasodis*).
1	8	0	do. 40 yards (Large width *Pasodis*).

The feature of this contract system is that the artisans have no option but to get all their requirements of raw materials from the dealers to whom they are to give back the printed cloth. In addition to purchasing the cloth, the artisan has himself to bear the charges of railway freight,

cartage, *octroi*, etc. It is reported that for thirty *thans*, these charges come to approximately Rs. 9-4-0 as follows :—

	Rs.	a.	p.
Railway transport charges	4	0	0
Cart hire	3	4	0
Octroi	1	8	0
Other miscellaneous charges	0	8	0
Total ..	9	4	0

The contractor-artisan distributes the work between local wage-earning families and his own. The wages for printing are usually annas four per *than*, and the average earnings of the wage earner come to Rs. 1–4–0 to Rs. 2 per week. There are four contractor-artisans' families at Chirne and it is estimated that between them they finish about 250 *thans* each month. The earnings of the contractor-artisan vary from 4 annas to 6 annas per *than* or *pasodi*. In other words each family of contractor-artisans earns about Rs. 15 to Rs. 20 per month.

22. The calico-printing industry at Kasare in the Sakri taluka is on the wane. There are at present three houses carrying on this industry and only two of them carry on independent business...Most of the printing done by the independent artisans is on *khadi* cloth. This is purchased in the local market onweekly bazar days from Mahar weavers from the villages. The usual purchase price is stated to be Rs. 12 for eight pieces of ten yards each. According to the artisans, the cost of printing 8 pieces of cloth comes to Rs. 1–4–0 and the selling price of the same to Rs. 15. It requires six days for each family to print eight pieces of cloth. The monthly income on this basis comes to about Rs. 15 per month per family. The third family is reported to have only two workers who work for wages for dealers in Pimpalner at 5 annas per *than* of cloth. They estimate their cost of printing at about 2 annas per *than*, leaving them 3 annas as their wages per *than*. They work for 7 hours a day and finish about 5 to 6 *thans* a week.

23. As a whole the economic position of the calico printers has deteriorated. Thus it is stated that ten years back, the contract rate for printing 10 yards of cloth was 10 annas against 6 annas of the present day. The depression is due to many causes, among them being lack of co-operation and organisation in the industry. The artisans are reported to be competing with each other and that through want of sufficient capital there is no staying power among them. Not only is there competion between artisans in one centre but there is also competition between the workers at different centres. As an instance, the investigator was informed that when the workers at Chirne resolved that they would no longer bear the transport charges and that the dealers themselves should bear them, the Malegaon dealers completely ignorned the resolution depending for their supply upon the Malpur workers, with the result that Chirne workers had to give way. The wage-earners do not

get work regularly and during the monsoon the printing work cannot be done efficiently. The busy season is in winter, and at other times the business is very irregular. The artisans use old type of dies which are obtained either from Malegaon and Bhiwandi or from a local manufacturer at Chirne. This manufacturer prepares about 25–30 dies in a year, each costing from 8 annas to Rs. 2. Most of the artisans have with them dies worth Rs. 25 to Rs. 30. The investigator reports that some of the artisans are willing to learn new methods and new patterns and want Government to train them. They complain of inadequate marketing facilities and want financial help.

Wool Weaving.

24. This industry is carried on on a small scale in the talukas of Dhulia and Sindkheda. The investigator reports that at Songir in Dhulia taluka, there are about 25 looms on which blankets are woven and they use about 70 *pallas* of wool per week. As only 7 or 8 weavers have their own sheep, wool is imported from Sakri, Khamgaon, Amraoti and from Jalgaon. All the looms are of a primitive type and it is stated that each loom with its accessories would not cost more than Rs. 8. The weaving is done with the help of throw-shuttles. To weave one blanket it is estimated that about 2 to 2½ lbs. of wool are required. This wool is spun in a day by one person putting in work for ten hours. He gets a wage of 2 annas for this work. Warping, sizing and weaving require another day. About 8 blankets are woven in a week. Generally, the spinning of wool is done by the women in the family. The blankets are sold in the markets of Shahada Taluka, Navapur and Nandurbar. Blankets of the size of 96″ × 32″ fetch about 12 annas each, while those of the size of 90″ × 27″ fetch about 8 annas each. It is stated that on an average the daily output of blankets in the whole of Songir is 80 in the brisk season and 40 in the slack season. In the rainy season, half the number of weavers is engaged in shearing wool in the surrounding villages. The weavers report that their main handicap lies in the poor quality of the local wool. It is stated to be rough and tough and of short staple, and so useless for the production of better types of goods. They also state that though in Sakri and Dhulia talukas, there are many sheep, these suffer from diseases of all kinds, and as no veterinary help is easily available, the shepherds are unable to control the disease. It was suggested to the investigator that improved methods of sheep-breeding and chemical treatment of wool would help to secure adequate supplies of better quality wool to the weavers at Songir and other places.

25. The difficulties and problems of the wool weavers at Malpur in the Sindkheda taluka whom the investigator interviewed are also more or less identical. There are about 20 looms in the village. The main industry of the village is, however, the gathering of wool and weaving is only a subsidiary industry. The wool is gathered in winter and sold at Rs. 50 per *palla*. The cost to them per *palla* comes to Rs. 40. Whenever there is no fair price for their wool, they themselves spin and

weave it into blankets. The cost of weaving a blanket comes to about 8 annas, 6 annas for wool and two annas for other miscellaneous charges. Against this a blanket fetches 10 annas, leaving 2 annas as wages to the weavers. Two weavers working for 10 hours a day can weave one blanket. It is stated that on an average a family of four workers weave about 16 blankets a week and earn about Rs. 2. Regarding the quality of wool, the complaint is similar to that of the Songir weavers. They want improvement in the quality of the wool and in the breeding of sheep.

26. The investigator reports that the younger class of weavers is willing to learn new designs and new methods of weaving. They want Government to train them in new methods by holding demonstrations. The weavers also require marketing facilities as at present they have to rely either on the dealers who come to their village or on casual sales in the weekly bazar.

Dairy Industry.

27. Khandesh is known for its butter, and the investigator inquired into the conditions of the dairy industry in one of the villages of the Dhulia taluka, named Borvihir. In this village there are reported to be 12 to 15 professional cowherds and each of them owns five to seven buffaloes. There are also about 75 agriculturists who own one or two buffaloes each. Most of the cowherds are bound by contract to dealers to supply them with their weekly produce of butter at a fixed rate, as the dealers advance them money at the rate of Rs. 50 for each milch buffalo. It is stated that the total amount advanced in this manner by a Chalisgaon dealer in this village comes to as much as Rs. 5,000 to Rs. 6,000. It seems this system is of recent origin. The total output of butter in this village is estimated at 120 seers per week in the rainy season and 275 seers in the brisk season. The daily output of skimmed milk is stated to be 60 seers in the rainy season and 120 seers in the brisk season. Most of the milk is sold to hotels in Dhulia at 16 seers per rupee. The milkmen stated that they are carrying on their occupation at a loss, as the cost of maintaining a buffalo is said to be 10 annas a day, while the receipts come to only 9½ annas, consisting of 5 annas in butter, 4 annas in milk and 6 pies in cow-dung cakes. It seems that the industry suffers from the hold of middlemen, and the butter dealers and the investigator was informed that unless a co-operative society is formed which undertakes to pay back to the dealers the advances taken by the cowherds, it would be difficult to improve their economic condition. It may be added that the Agricultural Inspector of the district told the investigator that there was a great deal of adulteration of butter which ought to be prevented. It also appears that if adequate transport facilities can be afforded the diary industry could be developed further.

Cart-Making.

28. The investigator inquired into the economic conditions of the carpenters engaged in this industry at different centres in the district

such as Malpur, Sindkheda, Kasara and Songir. Everywhere the industry seems to be in a depressed condition, owing to lack of demand. At Malpur the carpenters have abandoned this industry and are doing only repairing work. Ten years back, there were 4 or 5 houses of carpenters who manufactured carts. The cost of manufacture at that time came to about Rs. 60 as follows :—

	Rs.
Wood	25
Iron	15
Wages to assistants	16
Blacksmith's wages	4
	60

and the cart fetched about Rs. 100 to Rs. 125. It took about a month for two men to make a cart. On an average each carpenter's house manufactured 8 to 10 carts in a year. The extent to which the demand for carts has fallen all round can be gauged from the instance stated by the investigator that ten years back at the Sarangkheda Fair (in Shahada taluka) more than 1,000 carts were sold whereas now hardly 500 are sold. The carpenters now maintain themselves on repair work, which gives them a wage of 6 annas to 8 annas per day. These carpenters are reported to be quite ignorant of any other trade such as making of furniture, toys, bedsteads, etc. Moreover, owing to poverty they are stated to be unable to send their children for apprenticeship to learn these other arts.

29. At Sindkheda, the industry is still being carried on though the number of carpenters engaged in this trade has considerably decreased. It is reported that about 15 years back, there were 10 houses of carpenters engaged in cart-making whereas the investigator was informed that there are now only four or five houses so engaged. This depression has affected both the output and value. The carpenters stated that ten years back the total monthly output in their place was about 25 to 30 carts in brisk season and the carts used to fetch about Rs. 125 to Rs. 150 each. Now the output is reported to be only 10 to 12 carts per month and the selling price Rs. 50 to Rs. 60 each. This lack of demand appears to have had a bad effect on the quality of the cart also. Ten years back the cost of manufacturing a cart according to the estimates of the carpenters came to Rs. 100 to Rs. 125 as follows :—

	Rs.
Frame wood	43
Iron	20
Wheel wood	8
Assistants' wages	30 to 50
	101 to 121

They now state that they have dispensed with their assistants and have reduced their cost to Rs. 40 only. It thus seems that whereas ten years

back, the manufacture of one cart gave employment and maintained two artisans per month, now it can hardly maintain one satisfactorily. These carpenters get their wood and iron from local dealers, and sell their carts mostly at fairs. Most of the carpenters are indebted and as the industry is no longer paying, many carpenters have taken up building and repairs work to maintain themselves.

30. The condition of the carpenters at Kasara does not seem to be in any way better. Production is reported to have fallen by nearly 75 per cent. With the fall in the sale price of carts, the wages earned by the carpenters have also fallen low. At Kasara, the carpenters reported that formerly manufacture of one cart which took them about a month brought them an income of Rs. 40. Now the cart itself is sold for Rs. 40 and yields hardly Rs. 10 per mensem to the carpenters. Most of the carpenters, therefore, do this business only as a subsidiary occupation, engaging themselves mainly in building works, or repairs of agricultural implements, etc.

31. At Songir, the industry is carried on, on a large scale. There are about 7 or 8 *karkhanas* in which about 50 carts are manufactured during the working season. About 15 years back, there were stated to be about 15 *karkhanas* which manufactured about 100 carts in the six busy months of November to April. Carts for both passengers' use and for conveyance of goods are now prepared and sold to the dealers from Berar, Nizam's territory, Ahmednagar, and other places.

A passenger cart is reported to cost about Rs. 40 and is sold for Rs. 50, while a goods-cart costs nearly Rs. 45 and fetches about Rs. 60. The average earnings per cart come to Rs. 10 to 15. It usually takes two men to prepare a cart in one month. The assistant is paid about Rs. 3 as his share per cart.

32. In most of the centres, the carpenters themselves do the blacksmiths' work while preparing the cart. At some places, however, the blacksmiths prepare the iron parts of the cart. The general depression in the cart industry has also affected the blacksmith's earnings. The carpenters follow the old and primitive methods in preparing the carts and are reported to be unable to improve the pattern of their carts. The carpenters state that the competition of motor buses and lorries has killed the cart-traffic and has adversely affected their industry.

Furniture Making.

33. At Dhulia there are a few furniture manufacturers. An important manufacturer who was interviewed prepared wooden and iron furniture,

and iron implements. His monthly purchases are usually worth, according to his own statement, about Rs. 1,700 consisting of :—

	Rs.
Wood	700
Iron	700
Hinges, etc.	200
Polish, paints, etc.	100
Total ..	1,700

He makes his purchases either from the local merchants or direct from Bombay. He states that his purchases about 3 or 4 years ago, were worth about Rs. 5,000 to Rs. 6,000 but now due to depression his trade has considerably decreased. As the local teak is not found to be suitable he has to import a superior kind of teak from outside. He has a workshop fitted with lathes, drilling machines, etc., which are run on power. The wood goes through several processes such as cutting, planing, joining, polishing, etc. Excepting the lathe, drilling machines and the saw, all other tools are worked by hand. He engages 10 to 15 workers who are all skilled. The cost of his equipment as detailed by him comes to nearly Rs. 2,300. The maintenance of equipment costs him about Rs. 350 annually : Rs. 200 on repair charges and about Rs. 150 on other charges. With the aid of this equipment he manufactures wooden furniture of all sorts and also iron implements and furniture, such as winnowers, harrows and cots. His complaint is that there is not enough work for his equipment on account of inadequate demand. His monthly sales come on an average to Rs. 1,500 worth of wooden articles and Rs 1,500 worth of iron articles.

34. There is no regular demand for his products with the result that sometimes his equipment has to remain idle. He generally depends upon local offices, shops and private individuals for his orders. The goods are mostly supplied on credit, though the dealer does not find this arrangement satisfactory. He feels the competition of the local artisan-carpenters and of the organised manufacturers outside the district. His workshop establishment consisting of 10 artisans and 4 apprentices, work for 8 hours a day and are paid at rates varying from annas 8 to Rs. 1-8-0 per day for the artisans and Rs. 4 per month for the apprentices. On the whole the manufacturer states that his industry does not pay him enough. He suggests that he should be given Government orders for the supply of furniture, etc. He seems to be of the opinion that Dhulia is not a favourable centre for furniture manufacture on any large scale as the wood available locally is of an inferior kind.

Itinerant Blacksmiths.

35. The investigator interviewed two itinerant blacksmiths at Sindkheda. These are a class of village artisans by themselves. They tour from one village to another repairing and selling agricultural

implements and other requirements of the villages. Usually they have a common understanding and if one of them goes to a certain village, another will not go at the same time and open his shop in the same village. They are commonly known at *Panchals*. In the rainy season when they cannot go on their village rounds, they prepare domestic utensils. As is usual in the villages, agriculturists pay for their services both in kind and in money. Usually the materials required are supplied by the agriculturists themselves and the *Panchals* are paid their wages only. The equipment of these *Panchals* is reported to be very primitive. They have practically no expenditure to incur except on fuel. For this purpose they buy coke at Songir or Sindkheda at Re. 1 per maund. This quantity lasts them for about a week. As regards the raw materials, whenever it is required by them, they purchase scrap iron from the villagers and prepare implements out of them. All the members of a *Panchal's* family work. Their usual wages come to 4 or 5 annas per day per worker. Their domestic utensils and other implements fetch them 6 pies to 2 annas each, depending on the article. The investigator reports that in the whole of Sindkheda taluka there are only 4 to 5 such itinerant blacksmiths whereas in Dhulia taluka there are 7 or 8 such artisans who come from Songir.

Brass and Copperware.

36. Some of the workers in brass and copperware were interviewed by the investigator at Songir. They work on a contract basis for the local dealers who supply them with the raw materials, viz., brass and copper sheets. The workers in brass mostly prepare domestic utensils. Details regarding working costs, etc., were given by one of the artisans who stated that he worked for a dealer at the rate of Re. 1 per maund of utensils. His working costs he estimates at 8 annas for coal, soldering material, etc. He has five workers in his family and can prepare 10 maunds of utensils per week, the family as a whole earning a net income of Rs. 5 per week. It is stated that there are about 25 such families who work for the local dealers who market these wares all over the Khandesh district.

37. Similar details regarding copperware were obtained from another artisan who stated that he brought work from the dealers at the rate of Rs. 1-8-0 per maund of utensils and that his working costs came to 12 annas per maund. He has two workers to help him and his weekly output of work is 6 maunds of utensils. Another worker who has 5 workers, can prepare 10 maunds of copperware per week. None of them engages outside labour. The copperware manufactured is all of the domestic type and it is exported outside to different places in the Khandesh districts.

38. In addition to the workers in brass and copperware there are a few artisans who specialise in polishing the brass and copper wares. They also work for the dealers on contract basis. The usual rate at which work is undertaken is Rs. 1-8-0 per maund of utensils. The artisan who was interviewed, has a small lathe and buff machine costing about Rs. 30

and has two workers from the family to assist him. He polishes about 3 maunds of utensils a week and his working costs come to about 5 annas per maund. There are two or three more artisans who are engaged in this polishing industry but they are reported to have no buff machines; these artisans do not get sufficient work locally and have, therefore, to bring work from Parola, Amalner, Nandurbar, and other places.

The main requirements of the artisans as gathered by the investigator are: (1) Government assistance for learning new designs and new methods and (2) facilities for marketing their products at more remunerative rates.

Bell-metal ware.

39. It is reported that there are four *karkhandars* in Songir who manufacture wares from bell-metal. Generally they prepare their wares such as cymbals, plates and bells, from old bell-metal wares. But sometimes they have to prepare the bell-metal also. This is stated to be done by melting 75 per cent. of copper and 25 per cent. of tin. For preparing one maund of bell-metal ware from old metal, the charges come to Rs. 18-8-0 against the selling price of Rs. 20. The monthly output of each *karkhandar* is on an average 20 maunds. At the rate of Rs. 1-8-0 per maund, each *karkhandar* seems to earn about Rs. 30 per mensem.

40. It is stated that there are only 4 *karkhandars* in the town for the last 40 years who are engaged in this industry and that even they are now in a bad way. The demand for bell-metal ware has greatly fallen during the last 20 years due to competition from other polished wares, mainly aluminium. Ten years ago the total output of bell-metal ware in the town is reported to have exceeded 100 maunds while to-day it is stated that it does not exceed 75 to 80 maunds. The products are sold locally or are exported to Nandurbar, Amalner, Dhulia, Nasik and other places.

Tanning.

41. The investigator obtained his information regarding the tanning and shoe-making industry from different artisans at Ranale in Nandurbar taluka, Sindkhed and Malpur in the Sindkhed taluka and in the Sakri taluka.

42. At Ranale there were reported to be sixty houses of tanners some twenty-five years back but due to complaints by neighbours regarding the foul smell emanating from tanning, the industry was closed down and the tanners migrated to nearby places. Recently, however, the industry is being again carried on in Ranale, though to a smaller extent, at a long distance from the residential quarters. There are now reported to be only 13 houses engaged in this trade. The tanning is done according to the old and crude methods. Each house tans on an average about 4 to 5

hides a month though in one case as many as 10 to 15 hides were tanned. According to the estimates of the artisans the cost of tanning 20 hides comes to about Rs. 25, the details as given by them are as follows :—

	Rs.	a.	p.
Lime	1	10	0
Ghatbor (Zizyphus Xylopyra) fruits	16	0	0
Tarwad (Cassia Auriculata) bark 25 per cent. ..	5	0	0
Wages for labourers	2	0	0
Total ..	24	10	0

The sale price of 20 tanned skins is reported to be about Rs. 32. In other words, the wage for tanning 20 hides comes to about Rs. 7 only and a family seems to earn not more than Rs. 2 per month. Besides tanning these artisans are also engaged in making shoes, water-carriers, saddles, etc. Country shoes or *champals* are prepared by about three or four families and saddles by about 8 families. It is reported that each family makes 8 to 10 pairs of shoes per week at a cost of Rs. 5 and sells them for Rs. 6 to Rs. 7 earning from Re. 1 to Rs. 2 as their wages. The cost of making a saddle is stated to be Rs. 11 to Rs. 12 and its selling price Rs. 15. The weekly output of saddles in a brisk season, in all the eight families, is estimated to be not more than 5 to 6. It is stated that some 12 years back there was more demand for saddles and the weekly output at the time was nearly 30 saddles. Moreover, the saddles fetched nearly Rs. 30 each, the better type selling for as much as Rs. 50 and consequently the wages then earned were also high. Now due to motor cars horse-riding is not popular and saddles are not in demand. Their prices have therefore fallen considerably. Besides these occupations the tanners also work for the agriculturists. They are in some cases, paid in kind and get about 48 *payalees* of grain per year. About three of them own land and follow agriculture as a subsidiary occupation. The monthly income of each family of tanners from all these different kinds of work is estimated not to exceed Rs. 12. The artisans do not think much of the possibilities of improvement in the trade of saddles or *champals* but believe that the tanning industry has a bright future, particularly in their centre, which is near a river and where water charges are very low in comparison to other centres.

43. At Malpur, there are nearly 30 houses engaged in the tanning industry with nearly 100 tanning pits. They are carrying on their business by primitive methods. They get their supplies of hides from Dondaicha and pay Rs. 1-8-0 to Rs. 2 for a cow hide and Rs. 3 to Rs. 5 for a buffalo hide. The cost of tanning five hides costing about Rs. 5 each, is stated to be about Rs. 6-4-0 and the work takes two persons about one and a half months. These tanned hides are sold at Rs. 35 for five and on this basis the workers seem to earn only about Rs. 5 as their wages for 1½ months. Their income from the preparation of country shoes is

estimated at Re. 1 per week, but it is stated that about 8 or 9 people only are engaged in this trade. Most of the other artisans do agricultural work as a subsidiary occupation.

44. At Sindkheda, the tanners have left off their industry and have taken to shoe making, repairing work, etc., as they could get only about Re. 1 to Rs. 1-8-0 from tanning after putting in labour for about 1½ months. Now about 2 or 3 of them have learnt the art of preparing fashionable shoes and earn about 5 to 6 annas per day in the brisk season. The cost of preparing a pair of shoes is reported to be Rs. 1-8-0 to Rs. 2 and its selling price Rs. 2-2-0 to Rs. 2-4-0. The others prepare only the country *champals* costing annas 7 per pair and these are sold for 9 to 10 annas per pair. Each family prepares about 5 to 6 pairs per week and earns about Re. 1. Ten years ago they earned about Rs. 2 to Rs. 2-8-0 per week. Now due to the competition of cheap rubber and canvas goods, there is no demand for the costlier type of *champals*.

45. The tanning industry at Sakri is of special interest as the tanners at this place have been trained in the new methods of tanning by the Department of Industries. The investigator collected details regarding the respective costs of tanning leather under the old and the new methods. His figures are given below :—

Cost of tanning 20 hides under the old system—

	Rs.	a.	p.
Ghatbor (*Zizyphus Xylopyra*) fruits (325 seers) ..	12	0	0
Lime (64 lbs.)	1	12	0
Wages	10	0	0
	23	12	0
or	24	0	0

Cost of tanning 20 hides under the new system—

Bark	10	0	0
Lime	1	0	0
Oil	0	12	0
Myrabolams (*Terminalia Chebula*) fruits ..	1	0	0
Wages, etc.	6	0	0
	18	12	0
or	19	0	0

It is stated that under the old method, tanning of 20 hides takes one family 1½ months while to tan the same number of hides takes only a month by the new method. Due to the adoption of new methods the income of the tanners is stated to have increased. It is reported that whereas formerly they obtained Rs. 10 per month, they now get about Rs. 20 to Rs. 22.

46. The investigator reports that at all the centres the tanners complained about the stoppage of free supply of tanning materials from forests. Moreover, the auctioning of *turwad* bark is reported to have raised its price and the tanners now use *ghatbor* fruits to a large extent. But the hides tanned with *ghatbor* fruits are stated to be of an inferior kind, and it is reported that the *ghatbor* fruit spoils the leather. The tanners at all the centres, therefore, urge for the discontinuance of the auctioning system and request for the free supply of tanning products available in the forests. The tanners at the different centres also want Government assistance in training them in new methods of tanning and want tanning demonstrations to be held at their centres.

Manufacture of Shoes and Boots.

47. This industry is one of the important industries of Dhulia. The investigator interviewed one large scale manufacturer and dealer, and two independent artisans. The manufacturer employs six workers, of whom four are from his own family and two are wage earners. He also gives work to outsiders on piece work system. He gets his supply of raw materials from Chalisgaon and Bombay.

His monthly purchases of raw materials are estimated to be worth about Rs. 100. His equipment consists of a sewing machine, an instrument for punching and cutting, wooden logs, hammers, etc., and has cost him about Rs. 125 to Rs. 150. The repairs and maintenance charges of this equipment come to about Rs. 20 per year. The various processes through which the leather passes before boots and shoes are prepared, are being done by hand, except sewing which was done on the machine. It takes ten hours for one worker to prepare a boot while 3 pairs of *champals* can be prepared within the same time. The boots are prepared in the workshop while pathan-sandals and *champals* are prepared by the out-workers who are paid at the rate of Re. 1-2-0 to Rs. 1-8-0 per pair of pathan-sandals, and 10 annas to 14 annas per pair of *champals*. The prices obtained for the different varieties of footwear manufactured by him were detailed by him as follows:—

Boots	..	Rs. 2 to Rs. 8 per pair according to quality.
Slippers	..	Rs. 1-12-0 to Rs. 6 per pair according to quality.
Pathan-sandals	..	Re. 1-4-0 to Rs. 2-8-0 per pair according to quality.
Champals	..	Re. 0-12-0 to Rs. 2-8-0 per pair according to quality.

The demand for boots and shoes is brisk in the months of October to February while *champals* are in demand in summer. In the rainy season business is stated to be slack, when production is reduced and purchases are made for purpose of stock. He feels the competition of machine

made products and of rubber and canvas shoes. To meet this competition he has begun imitating the machine-made products but he does not find workers who can do this. After meeting all the expenses, he stated he just earned enough to maintain himself and his family.

48. The other two *chambhars* who were interviewed, were independent artisans who get their raw materials locally. Their appliances cost them about Rs. 20. One of them has four workers in his family, while the other works by himself. Their output varies accordingly. The artisans with four workers can produce about 125 pairs of shoes and slippers in a month in the brisk season and about 80 pairs in the slack. The artisan without any workers, on the other hand, produces about 30 to 40 pairs of shoes and slippers per month. Their products are reported to be of a medium quality and to fetch about Rs. 1-12-0 to Rs. 2-2-0 per pair. The cost of preparing 20 pairs of shoes is said to vary from Rs. 25 to Rs. 30 according to season. They state that on an average their work yields them a wage of 8 annas each per day.

49. According to the first *karkhandar* who was interviewed, there are about 10 *karkhandars*, 100 shoe makers, 40 *champal* makers and 25 wage-earners at Dhulia. The total value of raw materials utilised in the industry is stated to be approximately Rs. 32,000 and the total annual production is estimated as Rs. 55,000 worth of shoes and slippers, and Rs. 12,000 worth of *champals*. The imports of competing goods from outside is roughly estimated as follows:—

	Rs.	
Rubber and canvas shoes ..	5,000	
Bags, belts, etc.	2,000	
Champals	2,500	
Harnesses, saddles, etc. ..	50	
Jodas	200	(from Poona).
	1,000	(from East Khandesh).

It is further stated that out of the total output at Dhulia, about Rs. 40,000 worth is exported and sold at village fairs, weekly bazars and markets of Chalisgaon, Amalner, Chopda, Parola, Yeola, Manmad, etc.

50. The *karkhandars* and the artisans complain about the competition from rubber and canvas shoes which has almost killed their industry. They request that Government should arrange to give them adequate financial facilities, as at present they have no capital and that all of them are in debt and have to sell their goods for whatever price they can get. They also want marketing facilities and training in preparing leather products other than shoes and slippers. They are of opinion that a co-operative sale system will improve their lot if the right type of propaganda is carried on to educate them.

Pottery.

51. The investigator interviewed some potters in the villages of Sindkheda and Dhulia talukas. At Sindkheda they manufacture only earthen pots and do not know the art of preparing bricks. Most of them work for agriculturists, each potter doing work for about 10 to 12 agriculturists. They are partly paid in kind and partly in cash. In addition, to the cash received by them each potter gets about 10 to 12 *payalees* of grain per year. They also sell their wares at the weekly bazars. The cost of preparing the earthen pots comes to about 8 annas per 50 pots. The whole of this cost is on account of fuel as they get the quantity of earth required free of cost. It is reported that about 50 pots can be prepared in a week. Of this about 20 pots on an average are stated to be spoilt and unfit for marketing. The remaining 30 are usually sold for about Rs. 2. In the rainy season they are unable to do their work and therefore work as labourers in the fields.

52. The condition of the potters at Songir in Dhulia taluka is more or less similar. The kilns at this place seem to be of a larger size, as it is reported the potters can make about 300 pots per week in one kiln. But here the potters have to pay for the earth at the rate of 6 annas per two cart-loads, and the kiln requires fuel worth about 12 annas. The sale price of pots depends on their size and varies from 3 pies to 2 annas. Leaving out all the costs, the potters' estimate that a family of 6 to 7 workers gets about Rs. 3 a week.

Basket Makers.

53. Some of the basket makers near Sindkheda were interviewed by the investigator. They report that there are about five houses in the village preparing baskets, brooms, etc. Each family makes on an average about 20 baskets and 120 brooms per week. Two persons can make 3 baskets in a day with a cost of 2 annas and earn about 4 annas between them by selling the three baskets for 6 annas in the weekly bazars. The cost of making 120 brooms comes to about Rs. 5 and these are sold for Rs. 6-8-0. On an average a family of 4 to 6 workers is estimated to earn about Rs. 3 per week from the manufacture of baskets and brooms. Bamboos from which baskets are prepared are purchased locally at 2 annas per bamboo and the *Shindi* leaves from which brooms are made are purchased for Rs. 4 to Rs. 5 per head-load from the *Mangs* who bring them from outside.

The general impression gathered by the investigator is that the industry is not in a good condition even though there is no competition among the artisans.

Possibilities of New Industries.

54. The Gazetteer mentions that vegetable dyes were prepared in the district from *Al* and *Guli* but this industry has now disappeared. The possibility of reviving this industry as also the possibility of preparing dyes out of some of the forest products need further detailed investigations. There also seems to be some scope for the manufacture of Ayurvedic drugs, as a large variety of medicinal herbs are said to be available in the jungles of this district. The Divisional Forest Officer also mentions the possibility of developing the match industry and a bamboo pulp industry in the district. He also states that there are vast pastures in Shirpur taluka and that a dairy industry can be usefully located in that place. Among other possibilities, may be mentioned the preparation of catechu from the *khair* tree, extraction of oil from *Brahmi*, *Malkangani* and *rosha* and from *mhowra* seeds, and collection of honey on a scientific basis.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

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Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

KOLABA

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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KOLABA.

Position and Area.

The district of Kolaba lies between 17° 51′ and 19° 8′ north latitude and 72° 51′ and 73° 45′ east longitude and occupies an area of 2,166 square miles. It is bounded on the north by the Thana district; on the east by the Western Ghats, the Bhor State and the districts of Poona and Satara; on the south and south-west by Ratnagiri; and on the west by the Janjira State and the Arabian Sea.

Physical Features.

2. The district is a rugged belt of country from fifteen to thirty miles broad, stretching south from Thana and the Bombay harbour to the foot of the Mahableshwar hills, seventy-five miles south-east. Situated between the Western Ghats and the sea the district contains spurs of considerable regularity and height, running westwards at right angles to the main range, as well as isolated peaks or lofty detached ridges. A series of minor ranges also run north and south between the main range and the sea. A few small rivers, rising in the hills to the east of the district, pass through it to the sea. The chief of these are the Ulhasa, Patalganga, Amba, Kundalika, Mandad and Savitri.

Climate and Rainfall.

3. There are four distinct climatic periods. The rainy season extends from June to October which is followed up to the end of November by the damp season. Then follows the cold season from December to March; and from March to June is the dry hot season. The rainy season is considered the healthy period of the year. In the region about Alibag there is always sea-breeze. Mahad is entirely cut off from sea-breeze and is subject to much greater changes of temperature. In the hot months, the heat is oppressive in Karjat except on the hill-tops. The rainfall on the coast averages about 90 inches. Further inland it is heavier and in the Ghat country it is still heavier.

Population.

4. The district has a total population of 628,721 persons of whom 48,213 are living in 7 towns and the remaining 580,508 in 1,469 villages. The important towns in the district are:—

	Population.
Uran	9,762
Panvel	8,423
Mahad	8,123
Alibag	6,653

The proportion of the urban population to the total population is about 7·6 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 260,208 of whom 172,973 are males. The occupational distribution of the total number is as follows :—

Exploitation of animals and vegetation ..	221,931
Exploitation of minerals	688
Industry	9,346
Transport	2,794
Trade	6,344
Public force and administration ..	2,713
Professions and liberal arts	2,459
Living on their income	524
Domestic service	6,637
Insufficiently described	5,469
Unproductive	1,303
Total ..	260,208

The proportion of the industrially occupied persons to the total earners is only about 3·5 per cent. However, in addition to the 9,346 persons shown as engaged in industrial occupations according to Census classification, there are 2,092 persons engaged in forestry, 5,522 persons in stock-raising, 6,018 persons in fishing and 688 in salt-making. Though these persons have been included in the Census classifications under "exploitation of animals and vegetation" and "exploitation of minerals" these can be taken to be industrially occupied for purposes of this survey. With the addition of these persons, the total number of principal workers engaged in industrial occupations comes to 23,666.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births for the five years ending 1937 was 38·91 per thousand while the mean ratio of deaths for the same period was 23·90. The survival rate for the district is thus 15·01 per thousand.

There is only one hospital in the district, maintained by Government at Alibag. There are 15 dispensaries in the whole of the district and there are three maternity homes and two leper hospitals. Of the fifteen dispensaries, six are maintained by municipalities, five by the District Local Board, three by the Tata-Hydro Electric Company and one by a Mission. The three maternity homes are situated at Alibag, Panvel and Chowk. The two leper hospitals are at Pui and

Poladpur respectively and are both maintained by a Mission. The total number of doctors in the district is estimated to be 45 of which 5 are in Alibag. The proportion of doctors to total population in the district excluding Alibag town, is one for every 15,600 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 42,450 persons are returned as literates. In other words the percentage of literacy in the district is only 6·8.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of institutions.	Number of Pupils.
Primary Schools	420	27,914
Secondary (including lower Secondary and English teaching) Schools.	17	2,038
Industrial, Commercial and Agricultural Schools.	2	167

Of the 1,469 villages in the district, only 340 villages had schools in them.

Transport Facilities.

7. The district is well served by good roads and motor services. It has also an extensive coast line with numerous creeks, rivers and waterways which reach far into the inland talukas. There are regular steamer services between Bombay and some of the ports in this district. The Great Indian Peninsula Railway passes through Karjat and Neral and there is a branch line which connects Karjat to Khopoli. The Matheran Light Railway joins the main Great Indian Peninsula line at Neral. Most of the passenger traffic in the district is done by motors which link up almost all the towns in the district. Details regarding the length of roads maintained by Government and the local authorities are not separately available for this district. But according to the statistics published by the Indian Roads and Transport Development Association, the district has 203 miles of stone-metal roads and 325 miles of unmotorable earth roads.

Survey of Resources : Agriculture and Pasture.

8. The district has an area of 1,385,635 acres of which 421,795 acres constitute the gross cropped area. Forests absorb 328,963 acres and other uncultivable land measures 238,781. Current fallows constitute 392,716 acres. There are 19,952 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives the details of the classification by crops of the cultivated area :—

	Area in acres in 1937–38.
Rice	277,146
Ragi	35,389
Gram	565
Other food-grains	45,849
Sesame (*til*)	2,567
Cocoanut	1,154
Other oil-seeds	933
Condiments and spices	573
Drugs and narcotics, other than tobacco	456
Fodder	54,454
Fruits and vegetables	2,463
Other miscellaneous crops	246
Total ..	421,795

It will be noticed that there are no important commercial crops in the district. Among food crops rice and *ragi* are important.

Fruits and vegetables accounted for an area of 2,463 acres in 1937–38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following details in respect of 1938–39 :—

	Acres in 1938–39.
Vegetables—	
Sweet potatoes	436
Radish	61
Others	55
Total ..	552
Green vegetables—	
Edible hibiscus (*Bhendi*)	16
Water melon	667
Others	510
Total ..	1,193

	Acres in 1938–39.
Fruits—	
Plantain	55
Mango	623
Jack fruit	20
Bullock heart	26
Others	38
Total ..	762
Total, Fruits and Vegetables ..	2,507

The district has a large trade in vegetables, cocoanuts and betelnuts. The proximity of the Bombay City and the facilities of transport communications has greatly developed this trade.

There are 54,454 acres under fodder. Most of the cattle in the district are of local breed. The Kolaba buffaloes are smaller, blacker and smoother-skinned than those of Gujarat. Sheep are usually imported from the Deccan. Goats are kept by a few persons. The details of live-stock in the district according to the Census of cattle taken in 1934–35 are as follows :—

Bull and Bullocks (working, breeding and young stock)..	23,246
Cows (do.)..	135,022
Buffaloes (do.)..	45,849
Cow-buffaloes (do.)..	42,735
Sheep and goats	36,662
Horses and ponies	715
Donkeys	575

Of these, milch cattle number 117,699 consisting of 88,372 cows and 29,327 cow-buffaloes.

Survey of Resources : Minerals.

9. The district is poor in minerals. The only mineral which the Gazetteer mentions is iron, of which traces are said to be found in the laterite in the different parts of the district. Building stones of a good quality are found everywhere. Sand is plentiful in all rivers and creeks. Shell lime is burnt in small quantities but is reported to be not suited for masonry and is chiefly used for white-washing. *Kankar* or nodular lime is found in Alibag and in parts of Mangaon. Rice-field clay is

abundant and used more or less all over the district for preparing ordinary tiles, water vessels and cheap bricks. It is also reported that on the Rasani Hills near Vadgaon in Alibag, large quantities of reddish earth are found and is exported to Bombay during September for preparation of Ganapati images.

Survey of Resources : Forests.

10. Kolaba is fairly rich in forests. The forests are valuable partly on account of their vicinity to Bombay and partly because they are capable of producing big timber though nearly all have been heavily exploited in the past. Teak and mango trees are found in good number. Black wood, though not common, is found in the Roha forests. *Dhavda* tree was once plentiful and is still found in small quantities. It yields a useful gun. *Ain* is a common tree and its timber is used for house building purposes. Among the other useful trees may be mentioned the *khair* tree from which catechu is prepared, the *avla* tree which bears a nut which is used for medicines or sometimes pickled, and whose leaves are used for tanning purposes, the tamarind tree whose wood and fruit are both useful, and soft wood trees of the *savar* and *pangara* variety. Leaves of *mahuli* trees are gathered and used for preparing *patrawalis* (leaf-plates) which are exported in large quantities to Bombay.

Survey of Resources : Power.

11. There are three electric supply companies in the district. Of these the Mahad Electric Supply Company has not yet started its work. The figures of output and distribution of the other two companies are as follows :—

—	Units generated.	Total Units sold.	Units sold for power purposes.
The Matheran Electric Supply Company	52,573	36,202	1,468
The Panvel Electric Supply Company	93,176 (Purchased from Tata's).	86,599	37,840

Survey of Resources : Capital.

12. There were 51 agricultural co-operative societies in the district at the end of 1937–38 and their working capital amounted to Rs. 84,000. The non-agricultural co-operative societies were 9 during the same year and their working capital was Rs. 2·56 lakhs. In addition, there were 35 post office savings banks with 4,719 accounts current at the end of 1937–38 and the balance at their credit was Rs. 10·26 lakhs. During the same year, postal cash certificates amounting to Rs. 2·63 lakhs were sold in the district.

Industries in the District—General.

13. The population engaged in industrial occupations has been estimated at 23,666 persons including 14,320 persons engaged in forest industry, stock-raising, fishing and salt-making. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	31
Butchers	110
Tailors, milliners, etc	522
Washing and cleaning	157
Barbers	972
Scavenging	119
Total ..	1,911

The remaining 21,755 persons may be regarded as engaged in industry. The Census tables give the following classified statistics :—

Forest industries	2,092
Stock-raising	5,522
Fishing	6,018
Salt-making	688
Cotton spinning, sizing and weaving	163
Rope, twine, etc., makers	124
Tools carding, spinning and weaving	127
Carpenters, turners, etc.	1,507
Basket makers	552
Blacksmiths	331
Workers in brass, copper and bell-metal	113
Potters and makers of earthenware	1,020
Sweetmeat and condiment makers	108
Boot and shoe-makers	483
Lime burners	736
Heat, light, electricity, etc.	231
Jewellery and ornaments	1,174
Other miscellaneous industries	766
Total ..	21,755

Of these, only 328 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Engineering	3	3	140	124
Food, drink and tobacco (rice-mills) ..	..	11	..	118
Chemicals, dyes, etc.	1	1	33	126
Processes regarding wood, stone and glass	1	1	155	500
Total ..	5	16	328	868

14. The investigator, Mr. B. M. Kale, spent 16 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Salt Manufacture.

15. Uran and Pen are the two well-known centres of salt manufacture in the Kolaba district. The industry is seasonal and gives employment to about 6,000 workers. The preparatory processes start from October and the actual production of salt is done from February to May. The salt is prepared in pans or *kundis* measuring 80′ × 25′. It is estimated that one pan yields about 72 maunds of good salt. The initial expenditure is stated to be Rs. 4 per pan for cleaning. There is one labourer for 16 *kundis* or pans and he is paid at the rate of Rs. 10 per pan for the whole season. According to one salt manufacturer the cost of preparing one maund of salt is about 3 to 3½ annas. The transport charges of conveying the salt to Bombay are stated to be 2½ annas per maund. The salt is sold at Bombay and other districts of the Province and sometimes outside the Province. It is stated that there is no internal competition between the salt manufacturers, but there is competition from other producers in India. The industry

was said to be in a prosperous condition till the year 1910 but since then it has been in a depressed condition. It is said this is due to over-production and competition between the producers of different centres. Most of the manufacturers complain about the heavy transport charges.

16. At Pen, the investigator interviewed one producer who manufactures salt and sells it on contract basis. The workers are paid at 5 annas a day. About six thousand maunds of salt are manufactured by him. The Pen salt is stated to be better and large quantities of it are exported to Sholapur, Poona and the Nizam's Territories. It is estimated that the salt industry at Pen gives employment during the season to about 600 workers.

Fishing.

17. The investigator reports that the sea-coast from Alibag to Revdanda and near Rewas and Uran is noted for good fish. Being near the Bombay city, the fishermen of the district have the advantage of a good and profitable market. Most of the fishermen sell their catch directly to the dealers from Bombay, though some of them take their fish to Bombay for sale. The investigator reports that the economic condition of the Kolaba fishermen is better than that of the fishermen in the Ratnagiri district.

18. Most of the fishermen interviewed by the investigator, have their own boats and nets. The cost of a boat is stated to vary between Rs. 250 and 300. The prices of nets vary, according to their sizes, from Rs. 150 to Rs. 200. They are prepared from Japanese yarn and are said to last for two years. Besides the boat and nets, wooden stakes are also required. These are fixed in the sea at some distance away from the coast and nets are anchored to them. The fish caught are *ghol* (Jew fish), *saman*, *rawas* (Indian salmon), *bombil* (Bombay Duck), and *kolambi* (Prawns). The *saman*, *ghol* and *rawas* are bigger varieties of fish and are sold at prices varying from Re. 1 per *ghol* to 6 annas to 10 annas per *rawas* or *saman*. The average sale of fishermen catching these bigger fish is estimated to vary from Rs. 100 to Rs. 180 per month according to the number of men working and number of nets under each fisherman. The smaller catch like *bombil*, *saranga* and *kolambi* are reported to fetch nearly Rs. 40 to 50 per month. Though fishing is carried on throughout the year, the brisk season is reported to be during the period from November to May. The workers who help in the catch are not paid in cash. The catch is distributed between the owner of the boat and nets, and the workers. The owner of the boat and the nets retains one-third of the catch and the remaining two-thirds are distributed equally between all the workers. As the Bombay market is near and there is a good demand for fresh fish, fishermen do not dry and salt fish for sale, as they do in the Ratnagiri and Kanara districts.

Kambli Weaving.

19. At Roha there are a few families of weavers who weave *kamblis*. The number of looms working at present is stated to be only seven,

though some year back there were reported to be 30 looms working. One of the artisans interviewed, has six members in his family who all work with him. On an average, this family requires wool worth about Rs. 150 a year. In addition to this wool, woollen yarn worth about Rs. 100 is also purchased annually. The wool is obtained from the local shepherds and yarn from the merchants. The artisan has one loom, the cost of which is stated to be only Rs. 10. The usual selling price of *kamblis* is Rs. 1-4-0 each. The value of the total annual output of this artisan is estimated to be Rs. 350. The *kamblis* are sold in the markets of Roha, Janjira and the neighbouring talukas. Most of the artisans complain about lack of capital and about the competition from cheap Japanese substitutes. It is stated that the agricultural depression has much affected this industry as the demand for these *kamblis* mainly comes from the agriculturists.

Beds and Pillows Making.

20. This industry is reported to have been recently started at Pen. The artisan uses a machine for cleaning and carding cotton and is reported to be travelling with it from place to place doing his business. The cotton is obtained from Bombay and the annual purchases are stated to be worth Rs. 400 to Rs. 500 a year. The carding machine is stated to have cost Rs. 1,450. The total annual output is valued at Rs. 800. Besides preparing beds, pillows, etc., out of the cotton purchased by him and marketing them, he also undertakes their preparation for those who supply him with cotton and cloth. The wages he receives by this work are not known but the total annual income from this source is stated to be about Rs. 150. He employs two labourers who are engaged whenever there is much work and they are paid at the rate of 6 to 8 annas a day.

Rice Mills.

21. The main crop of the district being rice, rice husking and grinding forms the main industry in the district. Formerly this was a cottage industry but for the last twenty-five years, rice mills are reported to have come into prominence. Even these are now said to be working without any profit. The rice-mills are reported to have prospered till 1925 mainly on account of the high price of paddy. The rice mill owners get their supply of paddy from the local agriculturists or in the local market, for Rs. 25 to Rs. 35 per *khandi* according to quality. The richer class of mill-owners purchase for stock while the average owner purchases only to meet the demands of his customers. Some of the cultivators take their paddy to the mills and get it husked at the rate of Rs. 3 to Rs. 4 per *khandi*.

22. The cost of equipment of the mills varies from mill to mill. In addition, the millowners have to incur the cost of maintaining motor lorries for transport of rice bags. The husked rice is sold usually at varying rates from Rs. 70 to 90 per *khandi* according to the quality of

rice. It is sold locally and in the markets of the Ratnagiri district and Bombay City. The investigator estimates that there are about 1,000 to 1,300 people employed in this industry. The mills usually work only during the non-monsoon season, for 9 hours a day and the workers are paid wages varying from Rs. 15 to Rs. 50 per month for the technical staff and six annas a day for manual labourers. The earnings of the mill-owners are reported to be very low at the present time due to internal competition. The investigator reports that most of the mills are at Panvel and Mahad. It is stated that new mills are being started at these places where even the existing ones find it difficult to earn any profit. The mill-owners suggest that Government should intervene in the interest of the industry and restrict the number of mills, fix the hours of work as also the charges for husking and grinding rice.

Parched Rice Industry.

23. At Pen, the investigator interviewed a manufacturer of parched rice. He uses machinery which is reported to have cost him Rs. 35,000. The engine is run on crude oil. The total investment in the concern is estimated to be Rs. 50,000. Besides parched rice, paddy is also husked in this mill. He purchases the paddy from the agriculturists or from the local dealers. Business is said to be slack during the monsoon period. The products are sold in the markets of Bombay, Poona, etc. The goods are sent by a motor lorry which is maintained by the owner. During monsoon there is much difficulty in transporting the goods as some of the roads become unfit for motor traffic. The owner complains against the competition from the parched rice-producers in the Karnatak and the Central Provinces. In husking rice he meets with competition from the local mill-owners. He employs fifteen workers of whom ten are paid daily wages at 5 annas a day and the remaining five who are skilled workers, are paid monthly wages varying from Rs. 8 to Rs. 50. All of them work for 8 hours a day. The owner reports that he is not making any profit on his investment and that his main difficulty is the want of working capital.

Copper and Brassware Industry.

24. The investigator reports that there are many families of copper-smiths at Roha, Mahad, Revdanda and Pen who manufacture copper and brassware for the Bombay dealers on a fixed-wage system. It is stated that these copper-smiths specialise in preparing a particular type of pots which are not yet manufactured on machines. The economic condition of these artisans is reported to be bad. The competition of machine-made ware is stated to have deprived them of their independent living and to have now made them only contract workers for the Bombay dealers. The metal sheets are supplied by the Bombay merchants and the artisans are paid at the rate of Rs. 2½ per maund for copper pots and Rs. 3½ per maund for brass pots. The artisan has himself to spend on the supply of such materials as coal, tamarind, etc. The total annual earnings of the two families interviewed by the investigator

are reported to be Rs. 500 and Rs. 600 for four and five workers respectively. Besides these contract workers there are employers who engage workers to prepare copper-ware. Copper plate is obtained from Bombay. The cost of equipment of these shops, varies from Rs. 100 to Rs. 200 according to the size of the shop. In one case, the total output is reported to be worth Rs. 650 a year while in another which prepared copper kettles for export to Arabia, the annual output is said to be about Rs. 1,000. Most of these merchants also keep for sale factory-made goods obtained from Bombay. The earnings of these merchants are reported to be low and there is said to be keen competition amongst them.

Silver-ware Industry.

25. The investigator interviewed two silver-smiths, one at Revdanda and the other at Roha. Both of them are engaged in preparing silver pots for the Bombay dealers. They are supplied with silver bars by the Bombay merchants and are paid wages at the rates of 9 pies per tola for their products. They have to incur all the incidental expenditure. The work of the silver-smith at Revdanda brings him an income of about Rs. 1,800 a year. He employs a worker who is paid Rs. 8 per month, and works for eight hours a day. The silver-smith at Roha prepares silver-ware which yields him an income of Rs. 500 a year. He states that he is just able to make both ends meet by taking to agriculture in the slack season. The competition of Sangli and Nasik products, and of machine-products is reported to have greatly reduced their rates of wages. It is stated that formerly the Bombay merchants used to pay them at the rate of $2\frac{1}{4}$ annas per tola. Now the Bombay merchants are reported to be refusing to pay more than 9 pies per tola.

Printing Presses.

26. The investigator interviewed two owners of printing presses, one at Mahad and the other at Alibag. Both the presses are worked on hand machines. The press at Mahad is estimated to have cost Rs. 1,800 while the one at Alibag only Rs. 600. The press owner at Mahad spends Rs. 300 on paper and ink annually and his turnover is worth Rs. 700 to Rs. 750 per annum. There are two workers who work for 8 hours a day and are paid Rs. 10 to 15 per month. It is stated that the press has not enough work to keep it fully engaged. The total capital invested by this owner is reported to be Rs. 3,000 and the owner complains that he does not get sufficient return on his investment. Recently another press is reported to have been started at Mahad and both the presses are now competing with each other. The press at Alibag utilises paper, ink, type, etc., worth about Rs. 650 a year. Paper is obtained from Bombay. The average amount of work done in a year is estimated to be worth Rs. 3,000. Printing is mostly done for order. The workers who number eleven, work for eight hours a day and receive wages varying from Rs. 6 to Rs. 30 per month. Here also the owner complains about the local competition, low return on investment and the lack of adequate working capital.

Cutlery.

27. At Pen, there is one cutlery works started by Mr. Manohar who has trained himself in the manufacture of cutlery in England. The total capital invested by him in the concern is stated to be Rs. 15,000. The main type of products manufactured are pen-knives, knives and scissors. They are manufactured with the aid of machinery, which is said to have cost about Rs. 7,000. Steel is obtained from England. The products are marketed throughout the Bombay Province and also in other parts of India. More than 30 workers are employed in the factory. They are paid weekly at rates varying from 2 annas to Rs. 1½ per day. The proprietor complains about the irregularity of the workers. According to him, there are good prospects in the industry and to encourage more people to take up to this industry, he suggests that Government should grant scholarships to students to go to England in order to get actual experience in factories. He also wants Government to grant protection to Indian manufacturers.

Toy-making Industry.

28. At Pen, the investigator interviewed one artisan who is engaged in the preparation of wooden toys for the last twelve years. The wood used is mainly of the *kuda* trees. Oil and colours are also used. All the raw materials are obtained from the local merchants. The toys are prepared with the aid of machinery. The industry is carried on throughout the year. The usual market for these toys is Bombay but they are sent to other places also according to demand. The toys are exhibited at fairs and exhibitions. He employs three workers who are paid Rs. 15 to 20 per month according to their skill. They work for eight hours a day, throughout the year. The net earnings of this artisan are estimated at about Rs. 40 to 45 per month. The main complaints of the artisan are regarding the inadequacy of working capital and of the supply of raw material—the *kuda* and *heddi* wood. It is stated that these trees are available only in the forest areas and the artisan wants that Government should sell him the required quantity of wood at reasonable price as it is not possible for him to make wholesale purchases of wood.

Carpentry.

29. It is reported that at Panvel there were some years ago 50 families of carpenters who specialised in making wheels of carts. To-day, it is stated that, there are only four or five families. Since the increase in motor-bus traffic, the bullock cart traffic has been hit hard and this has indirectly affected the carpenters' industry. The artisan interviewed uses annually, wood worth Rs. 300 and iron and hardware worth about Rs. 75. These raw materials are mostly purchased locally and sometimes obtained from Bombay. It takes the artisan ten days to prepare a pair of wheels, which is sold for about Rs. 30. About 35 pairs of wheels are prepared annually. The average

earnings of the artisan and his son together come to about Rs. 40 per month during the brisk season. During the months of November to March business is reported to be slack and then the artisan usually takes to agriculture.

Charcoal-Making.

30. At Roha and Pen, the investigator interviewed dealers in charcoal. The dealer at Roha purchases standing trees at the Forest Department auctions. His annual contracts are estimated to be worth on an average Rs. 4,500. He employs about 500 persons on piece-work basis and these are employed in the work of cutting the trees and making timber and also in making charcoal. The charcoal is sold in the markets of Bombay. The selling price varies from 6 annas to 7½ annas per maund. The total annual production is estimated to be worth Rs. 15,000. The timber is sold in the markets of Ratnagiri and Mahad. The total annual sales of timber are stated to be worth about Rs. 12,000. The work is slack in the monsoon. Though there is competition from other dealers, this dealer does not seem to be much affected by it. The workers are paid at the rate of one rupee per eight maunds of charcoal. Those engaged in felling trees are paid on contract basis.

31. The dealer interviewed at Pen prepares charcoal and also exports myrabolams (*harda*). His annual production of charcoal is stated to be 5,500 maunds. The market is both local and Bombay. The charcoal fetches about 5 annas to 6 annas per maund. The export of myrabolams amount to 500 maunds per year and fetches him Rs. 250. Besides charcoal and *harda*, this dealer also exports country herbs and roots worth about Rs. 200 per year. There are about 20 workers engaged by this dealer and they are paid on piece-work basis at the rate of 4 annas per bag of 3 maunds of charcoal, and 12 annas for collecting one bagful of *harda*. For collecting country herbs and roots, the workers are paid at 12 annas per bag.

32. The charcoal industry in this district is reported to have flourished till 1919, but since then there is depression in the trade. There is competition from Northern India and the prices have fallen too low to make the industry profitable. Still the export of charcoal from Kolaba is considerable. From Pen alone the investigator reports that charcoal worth Rs. 75,000 is exported annually to Bombay.

Ayurvedic Medicine Industry.

33. At Panvel, the investigator visited the well-known Ayurvedic medicine manufacturing factory of Dhootpapeshwar. The raw materials utilised are different kinds of herbs, minerals and animal products. These are obtained from outside. The annual purchases are estimated to cost nearly Rs. 40,000. About Rs. 25,000 are spent annually on the purchase of bottles, most of which are obtained from abroad. The medicines are prepared with the aid of machines run

on electric power. The annual output is stated to be worth Rs. 3 to Rs. 4 lakhs. The factory works throughout the year and the products are marketed throughout the Bombay Province and India, through a large number of agents and dealers. The total capital invested in the concern is estimated to-day at about Rs. 12 lakhs. The factory employs 225 workers who work for 8 hours a day and are paid wages varying from Rs. 8 to Rs. 45 per month. The company is reported to be maintaining their own printing press. It has been suggested that a glass factory could be profitably opened near this concern as glass bottles worth Rs. 25,000 are utilised by it annually.

34. At Pen, a dealer in herbs was interviewed. Herbs are obtained by him from the *katkaris* by paying them Re. 1 to Rs. 1-4-0 per day. These herbs are collected and sent to Bombay. On an average he is said to be exporting to Bombay about 100 bags every year and getting Rs. 600 from their sale. It seems that he retains a good margin of profit. He meets with local competition but as this is only a subsidiary occupation for him, the competition does not much affect him. There is reported to be good scope for this trade.

Oil-seeds Pressing Industry.

35. The industry of oil-seeds pressing by country *ghanis* is reported to be in a decaying condition. The severe competition from mill pressed oil is stated to have hit hard the indigenous oil presser whose economic condition is said to be very bad. Most of the *ghani*-owners have left their industry and taken to agricultural labour or other occupations. At Avas, the investigator visited a shop-keeper who also pressed oil as a subsidiary occupation. The oil is pressed from the seeds of the *karanja* trees. These seeds are available at Nagaon and Alibag. The shop-keeper does not seem to make much profit from this industry. This is confirmed by the fact that the shop-keeper also takes to agriculture as a means of subsistence.

Poultry Industry.

36. At Alibag the investigator visited a poultry farm which has been recently started. The farm has seven incubators and fifteen brooders. The eggs are sold at 6 annas a dozen and the birds at Rs. 6 per dozen. The brisk season for business is during the months of October to February. The owner states that the poultry industry will prosper if long-term finance is made available to the poultry-farm owners. He is also of opinion that there is good scope for industries like bee-keeping, sheep rearing, etc., if one has his own farm and adequate capital.

Bamboo-work.

37. At Avas, where the investigator interviewed the basket-makers, there are reported to be only three families of bamboo-workers. The increase in the motor transport and the change in the methods of

storing fish are stated to have affected the bamboo-work industry very adversely. There was a good deal of demand for bamboo mats some years back, from the bullock cart-owners. Similarly the fishermen used to stock their fish in baskets and there was a large demand for them. Now both these demands are absent. The articles prepared by them are mainly sold in the local markets, and some also in the Bombay markets. One of the artisans interviewed by the investigator, purchases bamboos worth about Rs. 60 a year at the rate of 5 to 6 per rupee. The time required for preparing the different articles like mats, baskets, sieves, etc., varies from 2 hours to 4 hours to a day or two. The sieves and baskets are sold at the rate of one to two annas each, while the mats are sold for 12 annas to Rs. 1-4-0 each. On an average, products prepared by this artisan in a year, are said to be worth about Rs. 90. The artisan thus seems to be earning only about Rs. 2½ per month. Both the artisan and his wife also take to agricultural labour and earn thereby about 4 annas to 5 annas a day.

Possibilities of New Industries.

38. Regarding possible new industries, it has been suggested that the possibility of manufacturing rough packing paper from rice husks should be investigated. Due to the large number of rice-mills working in the district, there is an abundant supply of this material which is at present reported to be wasted or burnt. The toy-making industry carried on, on a small scale at present at Pen, is said to present good scope for development. The flourishing concern of the Dhootpapeshwar at Panvel opens up opportunities for a glass manufacturing factory but it is not clear whether the raw materials necessary for the manufacture of glass are available in the neighbourhood. Further, it has been suggested that the proximity of the Tata Hydro-Electric Company's supply mains can be availed of for starting new industries near about Dharamtar-Mahableshwar road for the utilisation of locally available raw materials such as grass, bamboos, etc., for pulp making.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

NASIK

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the limited staff

and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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NASIK.

Position and Area.

The district of Nasik lies between 19° 35′ and 28° 53′ north latitude and 73° 15′ and 74° 56′ east longitude and has an area of 5,882 square miles. It is bounded on the north and north-east by the two Khandesh districts, on the south-east by the Nizam's Dominions, on the south by Ahmednagar and on the west by Thana district, the territories of Dharampur, Surgana and the Dangs.

Physical Features.

2. The district can be divided into three divisions according to physical features. First comes the Dang in the west, a portion generally divided by hills and intersected by ravines and covering the Peint taluka. To the east of the Dang comes the Transition Tract comprising the taluka of Chandor and parts of the Baglan, Kalwan, Dindori and Nasik talukas. Further east is the Desh Tract which includes the Malegaon, Nandgaon, Yeola, Niphad talukas and the eastern parts of Chandor and Sinnar talukas. Except the line of the Western Ghats which run from north to south, the general direction of the hills is from west to east, the higher portions being in the west. The Satmala or Chandor range of hills forms the water-shed of the district dividing the valley of Girna from that of the Godavari. All streams of any size to the south of the Chandor range are tributaries of the Godavari, the principal being the Darna, Kadva, Deo and Miralgin. In the north of the water-shed the Girna and its tributary the Mosam flow through fertile valleys into the Tapti.

Climate and Rainfall.

3. The climate of Nasik town and of the whole of the west of the district is the best in the Deccan. It varies in different parts but on the whole presents greater extremes of heat and cold in the east than in the west. In January extreme cold and in April extreme heat are experienced. During the rest of the year constant breezes from the west and south-west equalise the temperature. Rainfall varies considerably in the district. The annual rainfall of Nasik averages about thirty inches while at Igatpuri it is nearly one hundred and thirty inches. The rainfall is principally from the south-west monsoon and begins in June and ends in October.

Population.

4. The district has a population of 1,000,048 persons, of whom 843,640 live in rural areas consisting of 1,636 villages, while the

remaining 156,408 are to be found in 10 towns. The more important towns are :—

	Population.
Nasik	48,703
Malegaon	32,462
Yeola	16,751
Manmad	12,263
Sinnar	10,773

The proportion of urban population to total population is 15·6 per cent.

According to the Census of 1931, the total number of principal earners in the district is 355,717 of whom 259,752 are males. The occupational distribution of this total number is given below :—

Exploitation of animals and vegetation	264,872
Industry	37,830
Transport	7,180
Trade	17,298
Public Force and administration	7,528
Professions and liberal arts	4,609
Living on their income	736
Domestic service	3,124
Insufficiently described	9,493
Unproductive	3,047
Total ..	355,717

The industrially occupied proportion of the total principal earners is about 10·7 per cent. But in addition to the 37,830 persons shown as engaged in industrial occupations according to the Census classifications, there are 9,826 persons engaged in stock-raising, 3,423 persons engaged in forest industries and 669 persons engaged in fishing. Though these persons have been included under " exploitation of animals and vegetation " for purposes of Census classifications they can be taken as industrially occupied for purposes of this survey. The total number of principal workers in the district, engaged in all the different industrial occupations thus comes to 51,748.

Health and Medical Facilities.

5. As regards health conditions, some indication is provided by the vital statistics published in the Director of Public Health's Report for 1937. The mean ratio of births per thousand during the five years ending 1937 was 43·59 while the mean ratio of deaths was 23·88 per thousand. The survival rate for the district thus comes to 14·71 per thousand.

There are in the whole of the district, five hospitals, twenty-three dispensaries and eight other medical institutions like the Leper Home, Maternity Homes, Babies Homes, Sanatoria, etc. Of the 23 dispensaries, ten are maintained by the District Local Board, six by municipalities and the remaining either by Government, Railway and Cantonment Authorities or by private bodies. The number of doctors in the district is 85, including 37 in the town of Nasik. The proportion of doctors to population in the district excluding Nasik town comes to one per 20,000 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census 78,897 persons are returned as literate. The percentage of literacy for the district is about 7·9.

The following table sums up the educational facilities available in the district for the year 1937–38 :—

	No. of Institutions.	No. of Pupils.
Primary schools	669	53,331
Seconday (including lower secondary and English teaching) schools ..	25	4,216
Commercial, industrial and agricultural schools	3	86

Of the 1,636 villages in the district only 514 villages had schools in them.

Transport Facilities.

7. As regards transport facilities, the district is better supplied than some others. The Great Indian Peninsula Railway enters the district at Igatpuri and runs through its entire length as far as Naydongri. The line from Manmad to Hyderabad (Deccan) traverses a few miles of the Nandgaon and Yeola talukas, and the Dhond-Manmad line runs from Manmad to Yeola. The district is also well served with metal roads of which the Bombay-Agra, the Khandesh-Nizam frontier, the Nasik-Kalwan, the Nasik-Poona and the Ahmednagar-Malegaon are the most important. The total length of roads maintained by local authorities in the district is 634 miles of metalled roads and 1,646 miles of unmetalled roads.

Survey of Resources: Agriculture and Pasture.

8. The district has a total area of 3,771,640 acres, of which 2,345,685, acres constitute the gross cropped area. Current fallows constitute, 239,840 acres. The area under forests is 801,494 acres, while other uncultivable land measures 401,520 acres. The culturable waste, or land that is theoretically available for cultivation, is 42,172 acres.

The following table gives details of the classification by crops of the cultivated area :—

	Area in acres. 1937-38.
Rice	67,383
Wheat	280,674
Jowari	174,850
Bajri	896,158
Ragi	107,864
Maize	2,781
Gram	71,568
Other food grains including pulses	204,739
Linseed	21,857
Sesame (*Til*)	8,178
Rape and mustard	1,253
Groundnuts	41,855
Castor seed	676
Other oil-seeds	67,574
Condiments and spices	8,679
Sugarcane	8,372
Cotton	88,343
Other fibres	4,965
Tobacco	428
Other drugs and narcotics	398
Fodder	262,966
Fruits and vegetables	23,817
Other miscellaneous crops	307
Total	2,345,685

The important commercial crops in the district are cotton, groundnuts and linseed. Among food grains *bajri* and wheat are important.

The area under fruits and vegetables was 23,817 acres in 1937-38. More details regarding these important crops were obtained from the Department of Agriculture which supplied the following information in respect of 1938-39 :—

	Area in acres 1938-39.
Vegetables—	
Potatoes	1,155
Sweet potatoes	697
Radish	1,325
Onions	8,827
Others	56
	12,060
Green vegetables—	
Tomato	780
Fenugreek	4,754
Edible hibiscus	470
Musk melon	103
Water melon	147
Others	1,239
	7,493
Fruits—	
Plantain	201
Mango	1,204
Lime	254
Orange	94
Guava	944
Papaya	113
Grapes	754
Others	155
	3,719
Total, Fruits and Vegetables ..	23,272

The district has 263,000 acres under fodder which makes it the third largest fodder crop district in the whole Province. There are extensive grazing grounds on the eastern side of the district, particularly in the north and east of Malegaon and Nandgaon and the villagers breed a fair quality of miscellaneous cattle of the Deccani type. On the western side, the Baglan taluka is a good breeding ground and produces some fine cattle including *sonkheris*. In the Igatpuri and Sinnar talukas a good breed of cattle known as *Dongri* are bred by professional breeders.

According to the Census of cattle taken in 1934-35 the details of live-stock in the district are as follows :—

Bulls and Bullocks (breeding, working and young stock).				332,840
Cows	do.	..	..	273,314
Buffaloes	do.	..	..	23,091
Cow-buffaloes	do.	..	..	56,315
Sheep and goats	..	..	..	274,220
Horses and Ponies	..	..	..	11,591
Donkeys	..	..	..	4,379

Of these, milch cattle number 191,132 consiting of 157,701 cows and 33,431 cow-buffaloes. In fact, next to Ahmednagar district, this district has the largest number of cows in the whole of the Province.

Survey of Resources : Minerals.

9. The only minerals available are stone and lime-nodules which are found more or less all over the district. Good building stone is obtainable from the basalt of the trap which occupies the whole of the district. Good specimen of zeolities occupying cavities in the basalt are said to have been disclosed at the time of the construction of the railway line.

Survey of Resources : Forests.

10. The forests can be classified into two main classes. The forests of Peint and parts of Dindori and Nasik talukas are high forests, and grow good timber. The rest of the forest areas contain trees that are mostly useful for fire-wood. Among minor forest products may be mentioned bamboos, myrabolams, *tarwad* bark, *mhowra* seed, and *rosha* grass. The following statement sets out the receipts derived from forest products in the year 1937-38 :—

——	East Nasik.	West Nasik.	Total.
	Rs.	Rs.	Rs.
Timber	12,482	65,106	77,588
Firewood and charcoal	15,600	147	15,747
Bamboos	27	2,272	2,299
Grazing and Fodder grass	66,033	20,287	86,320
Minor produce	7,670	5,785	13,455
Total ..	101,812	93,597	195,409

It will be seen that though generally poorer in content, the forests of East Nasik are commercially more important and profitable than those of West Nasik. It may also be pointed out that the *rosha* grass grows only in the Khandesh and Nasik districts of the Bombay Province and the oil distilled from it is a valuable ingredient in the manufacture of scents. The District Forest Officer of East Nasik, reports that *rosha* grass yielding about 100 maunds of oil per annum is grown in the Kalwan and the Baglan talukas.

Survey of Resources : Power.

11. There are four electric supply companies in the district. Of these, the Sinnar Electric Supply Company Limited has recently started work. Figures of output for the remaining three companies are given below :—

—	Units generated.	Total Units Sold.	Units sold for industrial purposes.
	(0008)	(0008)	(0008)
Nasik-Deolali Electric Supply Company ..	1,625	1,354	1,040
Yeola Electric Supply Company ..	41	26	Nil.
Malegaon Electric Supply Company ..	34	24	6

Survey of Resources : Capital.

12. There were 252 agricultural co-operative societies in the district in 1937–38 and their working capital amounted to Rs. 17·55 lakhs. During the same year, the total non-agricultural co-operative societies in the district numbered 25 and their working capital amounted to Rs. 4·28 lakhs. Besides these co-operative societies, there were 75 post office savings banks in the district with 17,160 accounts current in 1937–38, and the balance to their credit at the end of the year was Rs. 30·4 lakhs. During the same year postal cash certificates to the extent of Rs. 6·9 lakhs were sold in the district. There is also a branch of the Imperial Bank of India in the Nasik town.

Industries in the District : General.

13. The population engaged in industrial occupations has been estimated at 51,748 including the 13,918 persons engaged in stock-raising, forest industries and fishing. Of these, the following classes of

industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	715
Butchers	260
Tailors, milliners, dress-makers and darners ..	1,996
Washing and cleaning	767
Barbers, hair dressers and wig-makers	1,911
Scavenging	491
Total ..	6,140

The remaining 45,608 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Stock-raising	9,826
Forest Industries	3,423
Fishing	669
Cotton spinning, sizing and weaving	11,023
Rope, twine and other fibres	1,779
Wool carding, spinning and weaving	912
Silk spinning and weaving	850
Dyeing, bleaching, etc.	413
Working in leather	171
Carpenters, turners, etc.	3,185
Basket makers, etc.	563
Blacksmiths and workers in iron	1,160
Workers in brass, copper and bell-metal	382
Potters and makers of earthenware	1,504
Brick and tile makers	159
Manufacture and refining of vegetable oils ..	143
Sweetmeat and condiment makers	435
Manufacturers of tobacco	960
Boot, shoe, etc., makers	2,973
Lime burners, cement workers, etc.	2,004
Makers of jewellery and ornaments	1,491
Other miscellaneous industries	1,583
Total ..	45,608

Of these, 3,194 workers were employed in concerns coming under the Indian Factories Act during the Census year 1931. The following

statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	No. of factories.		No. of workers.	
	1931.	1938.	1931.	1938.
Government and Local Fund ..	9	8	1,664	1,979
Textiles	..	4	..	163
Engineering	4	5	134	130
Minerals and metals	..	1	..	21
Food, drink and tobacco	..	5	..	120
Chemicals, dyes, etc.	1	4	31	97
Seasonal factories	20	21	1,365	1,864
Total ..	34	48	3,194	4,374

14. The investigator, Mr. N. M. Joshi, spent 20 days and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other date available to the Committee.

The Hand Weaving Industry—General.

15. The Census figures show that the textile industry gives employment to nearly 15,000 persons or nearly 33 per cent. of the total principal workers engaged in industries in the district. It is thus the dominant

handicraft of the district. It consists principally of cotton weaving located mainly at Malegaon, Nasik and Yeola; silk weaving located at Yeola; and coarse blanket weaving found in the hilly parts of the district. There is a good deal of admixture of silk, artificial silk and of gold and silver thread (real as well as imitation) in the cotton weaving industry. The chief articles produced are *sarees*, *khans* and turbans.

Handloom Weaving Industry—Cotton.

16. The pure cotton weaving industry is located mainly in Malegaon where according to Mr. Telang's "Report on Handloom Weaving Industry" there are about 4,000 looms. There are, in the main, four types of workers. First, there are the *karkhandars* or employers who own from 5 to 10 looms and employ workers to work under their supervision. Then there are the independent artisans who own their own single loom and work them with the help of their families; they have to purchase their raw materials and find a market for their products. Thirdly, there are the out-workers who own their looms and work in their own houses, but the raw material is supplied to them either by the *karkhandars* or by the dealers to whom also the finished product is required to be delivered. Finally, there are the wage-earners who do not have any looms and work for wage in the *karkhanas*. It appears that with the growing distress of the industry there has been a decline in the number of *karkhandars*, and that some of the wage-earners who have lost their jobs as a result, have become independent artisans. In fact, the independent artisans predominate in the industry; and this organisational feature is said to have had an important effect in accentuating competition and lowering prices. The dealer dominates the industry, even though there is no system of compulsory or conditioned sale.

17. The principal raw materials used in the industry are cotton yarn and silk yarn, both artificial and real. The counts of cotton yarn used in the industry vary from 6½s to 40s. Mercerised yarn of 2/84s and 2/64s and artificial silk yarn of 120s, 2/120s, 150s and 2/150s are also used. The counts of yarn mostly used are, however, of 16½s and 24½s. It is reported by one trader that recently there has been a shift in demand from lower to higher counts and that yarn of counts 32s, 40s, 60s, 2/60s and 2/80s are in great demand. Japanese mercerised yarn and artificial silk yarn are largely consumed by the handloom weavers, and

it is reported that this is a recent phenomenon. The cost of transport of yarn from Bombay to Malegaon varies from 3½ per cent. to 5 per cent. of the cost price of yarn while the difference in the prices of yarn charged by the whole-sale and retail dealer varies from 6 pies to 2 annas per 10 lbs; and as the price of 10 lbs. of yarn varies according to quality from Rs. 3–8–0 to Rs. 4–8–0, this means that the whole-sale dealer charges a maximum commission of about 3 per cent. The combined charges of transport and the wholesaler dealer's commission seem to vary, therefore, from 6 to 8 per cent. of the cost of yarn at Bombay. The suggestion was, therefore, made by most of the dealers who were interviewed that a spinning mill should be started in their locality. At present, the total imports of yarn into Malegaon alone are, according to the estimates of the dealers, worth about Rs. 15 lakhs to Rs. 16 lakhs a year.

18. No reliable data regarding the quantity and value of the total output of handloom products at Malegaon and other centres in the district could be obtained. But from an analysis of the statements obtained from the several *karkhandars* and independent workers, the following rough estimates have been calculated:—

	Monthly figure.
	Rs.
Value of yarn consumed per loom	29
Value of yarn consumed per worker	27
Value of output per loom	45
Value of output per worker	43

On the basis of these figures, the value of total handloom cotton products in the Nasik district can be estimated to be about Rs. 30 lakhs a year.

19. The market for these handloom products is partly local. The agricultural classes prefer *sutiband sarees* or *sarees* made entirely of cotton yarn only, as they are very cheap. Fancy *patals*, *ilkal* and *maheshwari sarees*, where artificial silk and mercerised yarn are used for borders, are popular among the industrial workers of Bombay, Poona and other labour centres; the plain cotton *sarees* are also taken by a number of them when they return to Konkan before the monsoon. The demand for the *sarees* in the making of which artificial silk and mercerised yarn

are used, is concentrated in the months of April, May and June. Formerly the Malegaon *sarees* had a large market in the Central Provinces, Berar and Hyderabad ; but those markers are being gradually lost and it is reported that to-day the main markets for these products, particularly the plain cotton *sarees* are Bombay and the Konkan. Most of the traders who were interviewed, report a continuous fall in the quantity and value of their exports and the following statement supplied by an important dealer at Malegaon illustrates the fall in prices of the different types of *sarees* :—

Saree PRICES : 1928–1937.

—	1928.	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.
	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Children's *sarees* (7 yards × 36").	2 0	1 13	1 12	..	..	..	..	1 2	1 0	0 14
Cotton *sarees* (8 yards × 46")	5 4	5 2	4 2	4 4	2 12	2 4	2 0	2 0	..	..
Chargomi (8 yards × 46") ..	5 0	4 10	4 0	3 10	4 2	..	..	..	..	..
Sangamneri (8 yards × 46")..	3 8	3 6	3 0	2 11	1 10	1 14	2 0	2 3	2 0	1 14
Ilkal (9 yards × 45") ..	4 2	4 0	..	4 0	3 10	4 0	3 8	..	3 8	3 10
Salothi (8 yards × 45") ..	2 5	2 4	1 14	1 9	1 9	1 5	1 5	1 3	1 2	..
Patal (9 yards × 45") ..	4 4	4 0	3 12	4 0	3 4	2 12	2 8	1 10	1 5	..
Maheshwari art silk ..	..	6 8	4 8	4 4	4 0	3 10	3 5	3 2	..	2 8
Theengomi	..	..	1 8	1 8	1 10	1 4	1 6	1 6	1 2	1 4
Maheshwari cotton ..	..	..	..	..	2 2	1 12	1 10	1 8	1 6	1 10

The figures may not be quite accurate but they are of importance in that they show the rapid fall in the prices of *sarees* of all descriptions.

20. As for finance, it is partly provided by the artisan himself and partly by the *sowcar*. No reliable information could be gathered on the extent of indebtedness, but looking to the fall in prices and incomes during the last 10 years, it appears to be considerable.

The main problem of the industry is of course competition. The artisans all complain bitterly about the competition of machine-made *sarees*, particularly those produced by power-looms. It is alleged that these *sarees* are really less durable though they have a superior finish, but on account of their cheapness, they are tending to drive the hand-loom products out of the market. It is pointed out that the dealers who control the trade have to cut prices in order to maintain their markets, and the result has been the headlong fall of prices of all handloom products. Correspondingly there has been a heavy fall in wages. The industry has been able to maintain itself by a steady cut in the earnings of its workers ; and it can almost be described as a sweated trade. The artisans further point out that the earnings of the dealers have not fallen in proportion to the fall in their own earnings. The dealers are said to be few and fairly well organised, while they themselves are many and have no staying power. The result is a fierce cut-throat competition amongst themselves which exposes them to the mercy of the dealers in the matter of prices. The fall is particularly great in the case of *sarees* having artificial silk and mercerised yarn which seem better suited to the power-loom. The weaver still seems to hold his own in the making of *lungis* and of *sarees* from cut warps obtained from mills. No shirtings, suitings or other kinds of cloth are made by the hand-loom weavers of this district.

21. The suggestion which most of these artisans make, is that restriction should be placed on the mills and power-looms ; and that these should not be allowed to produce *sarees* of yarn below a certain minimum count. The artisans also want adequate marketing and financial facilities.

Silk Weaving Industry.

22. According to the Gazetteer, the silk weaving trade was supposed to give employment to about 4,000 families in 1882. It is estimated that to-day about 1,000 people are engaged in silk weaving proper (excluding those engaged in *pagota*-making). Estimates made both by dealers and artisans engaged in the industry place the number of looms engaged in silk weaving proper at 700 to 800. The main products of the silk weaving industry are, *paithanis*, *pitambers*, *kads* and *pagctas*. It is stated that the output was much higher 10 years ago ; since then, the depression and the competiton of artificial silk and of imitation thread

have brought about an enormous fall in the prices of silk products. In support of this one prominent dealer of the place supplied the investigator with the following statistics regarding the fall in prices :—

Year.	*Kad*		*Pitamber.*	*Paithani.*
	For men.	For ladies.		
	Rs.	Rs.	Rs.	Rs.
1928	15	25	40	40 to 150
1929	15	25	40	30 to 130
1930	12	20	25	30 to 120
1931	10	18	25	28 to 128
1932	16	20	20	25 to 100
1933	17	20	10 to 12	17 to 75
1934	8 to 9	16	10 to 13	18 to 75
1935	9	16	11 to 13	16 to 70
1936	6	15	11 to 13	13 to 55
1937	6	15	11 to 13	13 to 55
1938	6	15	10 to 12	11 to 50

23. In this industry also, there are employers, artisans, and wage earners. There are no out-workers. It is estimated that there are about 100 weavers who own 2 to 4 looms each and employ outside labour, while there are 400 to 500 weavers with one loom each. It seems that here too the industry is mainly in the hands of independent artisans with little staying power and this seems to have had an adverse effect on the prices obtained for the products, even though their sales are nominally quite free from restriction.

24. The raw materials used in this industry are mainly silk, and gold and silver thread. It is interesting to note that at the time the Nasik Gazetteer was compiled, Yeola used to consume a fair quantity of Bengal silk. To-day the silk is foreign and in recent years comes mostly from Japan. The independent artisans mostly buy the silk from silk dealers locally who give them 2 months credit and charge interest at 9 per cent., while the *karkhandars* obtain their supplies direct from Bombay. Gold and silver thread is also required and is obtained to a large extent from Surat, a part of the demand being met by the local suppliers. The silk *paithanis* and *pitambers* are marketed mostly in the Central Provinces, Berar and the Nizam's territories. The small artisans sell their output to the local dealers, while the *karkhandars* export direct in a number of

cases. The industry is feeling very keenly the competition of artificial silk and power-loom products from Bhiwandi, Burhanpur, Warangal, etc. Here again, cheapness combined with a superior finish is said to be having its way, and the hand-loom weaver is stated to have been obliged to meet this menace by reducing his standard of living and by resorting to the use of artificial silk and of imitation thread in an attempt to produce a cheap product.* An idea of the fall in earnings is obtained from the following statement prepared by 3 weavers by reference to their account books :—

Product.	Time taken.	Earnings.	Earnings per day.
		Rs. a. p.	Rs. a. p.
Paithani .. " ..	8 days ..	1 1 3	0 2 2
Pitamber	5 days ..	0 14 0	0 2 10
Kad (for males without silver thread) ..	4 days ..	0 4 0	0 1 0
Kad (for females without silver thread) ..	7 days ..	0 12 0	0 1 8
Kad (for females with silver thread) ..	7 days ..	0 12 0	0 1 8
Fancy *patal* (without silver thread) ..	15 days ..	1 8 0	0 1 7
Fancy *patal* (with real silver thread) ..	15 days ..	2 0 0	0 2 2

In addition to the competition from outside, competition from among themselves has further added to their misery. It is interesting to note that 2 out of the 8 silk weavers interviewed at Yeola have given up the making of *paithanis* as an unprofitable business.

25. The main difficulty of the silk weaving industry is competition. The coming in of artificial silk has shattered its previous position as a privileged industry and the condition of the weavers is stated to be worse than that of their brethren in the cotton weaving industry. The fall in prices has led to the almost entire stoppage of giving outwork on contract which used to relieve the artisan from the need of purchasing the expensive raw materials required for this trade. He has been forced to work as an independent artisan and this has resulted in an increase in his indebtedness and added to the competition for markets. It may be noted that the antiquated throw-shuttle still dominates the industry of Yeola. Better technique, marketing facilities and improvement in the output and quality of the local gold and silver thread industry are some of the methods suggested for the encouragement of the industry. It has been also suggested that an association for grading and certifying the qualities of the weavers' products would help them in marketing them more easily.

Pagota-Weaving.

26. Another branch of the silk weaving industry is that which specialises in making *pagotas*. It is estimated that there are about 1,500 looms engaged in this trade. There does not seem to have been a great fall in the prices of *pagotas*, though with the increasing disuse of this kind of headgear, the demand has shown some tendency to decline. The *khandani* system is followed in some cases in the marketing of *pagotas*. The dealer gives the raw material on credit on condition that the finished product is sold to him. He charges no interest but takes a discount on cash payment when he buys over the finished product. The output is mostly exported to Ahmednagar, Poona, Bombay, Nasik, etc., and the total value of their production is estimated at between Rs. 3 lakhs and Rs. 4 lakhs. All the weavers seem to be in financial difficulties. It was suggested that their economic condition could be improved if a marketing and financing organisation is set up for the industry on proper lines by Government.

Calico Printing and Dyeing Industry.

27. There is a small calico printing and dyeing industry in the district. It gives employment to about 150 persons. There are two or three employers who employ a part of this number, but the majority are outworkers who are given work by the dealers. The total output of this industry is estimated at Rs. 1½ lakhs and it is reported that the output has fallen considerably during the course of the last 15 or 20 years. The articles used in the trade, are coarse cloth, both mill and *khaddar*, which are supplied by the dealers and colours of different kinds, sizing materials, alum, etc. One of the artisans, stated that for dyeing and printing 100 pieces of cloth supplied by the dealer, his cost comes to Rs. 32–8–0 while his receipts from the same amount to Rs. 37–8–0 at the rate of 6 annas per piece. He thus gets a monthly income of Rs. 5. Among the various demands put forth by these artisans, are the provision of training in better processes and the supply of new designs for printing. A complaint is also made about the municipal *octroi* duty on the import of cloth, which they use for printing.

Silver Thread.

28. The silver thread industry was established in Yeola in 1836 and it is reported to have given employment to 500 to 600 families in 1882 when the District Gazetteer was compiled. The condition of the industry then was also reported to be quite prosperous, the silver thread being locally consumed by dealers and weavers. To-day it is reported that there are 10 to 12 *karkhanas* in Yeola manufacturing silver thread, each employing on an average 5 workers. Both real silver thread and imitation silver thread are manufactured. The local silk industry consumes the former and the *pagota* industry the latter. The industry, however, does not satisfy the entire local demand, and silver and gold

thread is imported from Surat. The raw materials used in the industry are silver wire, obtained from Surat, and silk either purchased locally or obtained from Bombay. The industry at Yeola is not yet wholly mechanised and some of the concerns still carry on most of the processes by hand. Competition is felt from Surat in both real and imitation silver thread and from France and Germany in imitation silver thread. It is suggested by the workers engaged in the industry, that their equipment should be improved and that they should be given financial facilities at cheap rates of interest, for obtaining wire drawing and gilding machines. The fortunes of the industry of course fluctuate with those of the silk and *pagota* industries on which they are wholly dependent for their demand. The suggestion was made that, if Yeola itself was in a position to draw its silver wire, the cost of transport from Surat as well as the wages for wire drawing could be retained in Yeola itself.

Silverware.

29. It is estimated that at Nasik there are in this industry about 40 dealers, 10 to 15 independent artisans and 70 *karkhanas* owned by outworkers each employing 3 to 4 persons. The main organisation is of the contract type, work being handed out to artisans by dealers. Silver is given to the artisans who have to return finished products. The wages paid to them vary from 1½ annas to 12 annas per tola for ornamental work, Rs. 12-8-0 per 100 tolas for castware and Rs. 4 per 100 tolas for plainware. On this basis, it is estimated that an outworker earns on an average Rs. 30 a month. The market is partly local and partly Bombay, Poona and Sholapur. The artisans state that they are feeling the competition of inferior articles which are passed off as silver and which are sold at cheap rates. They, therefore, suggest that there should be an agency, preferably instituted by Government, which should stamp the silver articles indicating their quality. They also state that as their handicraft is becoming subject to the competition of machine made silverware, they are willing to take to mechanisation provided finance at cheap rates of interest is made available to them. They further suggest that expert technical advice should be made available to them for improving their equipment.

Brass and Copperware.

30. Nasik is well-known for its brass and copperware and Nasik brass and copper vessels are being sold in Khandesh, Bombay, Berar, Central Provinces, and Hyderabad. Moreover, there is a considerable and steady demand for these wares from pilgrims who visit Nasik. The total number of artisans engaged in this industry is estimated to be 300. There are four *karkhandars* together employing 125 persons, while there are 50 small workshops each employing two or three artisans. Of these small workshops, about 8 are owned by independent artisans who have to find their own markets. The rest are owned by outworkers who work to order and are largely under the control of dealers. The brass and

copper sheets are mostly obtained from Bombay. Some of the workshops use electric power and are registered under the Factories Act but most of them use charcoal or coke. The demand for their product is seasonal, being very slack during the rainy season. The commodities produced are utensils of various kinds used for cooking and for religious purposes. The industry is no longer in the flourishing condition in which it was years ago. It is reported that the factories which have been started in Bombay compete with Nasik wares in all the markets. The extension of this industry in the Khandesh districts is also reported to have further affected the market for Nasik wares. Moreover, the increasing use of aluminium vessels has largely reduced the demand for copper vessels, while the use of electric lamps and hurricane lanterns has much reduced the demand for brass lamps. The workers interviewed expressed the opinion that new markets should be found for them, and they should be trained in making more marketable commodities. Complaints were also made about the municipal duties as also about the heavy railway freight on the transport of brass and copper sheets. The industry is said to have been able to hold its own only in the matter of the small and highly polished brassware for which there is a steady demand from the pilgrims.

Iron and Steel Manufactures.

31. The investigator interviewed a manufacturer at Nasik who makes iron cots, chairs and building materials such as gates, water-tanks, etc. He employs 5 skilled workers, 10 unskilled workers, one clerk, and three apprentices. The raw materials used, are usually purchased at Nasik itself. Electric power is used only for drilling ; the rest of the processes are carried out by hand. The market for his products is mainly local. The manufacturer pays wages to the skilled artisans at rates varying from 8 annas to Rs. 1–2–0 per day and to the unskilled labourers at the rate of 4 to 6 annas a day.

Furniture-making.

32. The furniture maker interviewed by the investigator at Nasik is a big *karkhandar* employing 9 skilled workers and 11 apprentices. According to this *karkhandar* there are three or four furniture *karkhanas* in addition to his own in Nasik town. The market is mainly local. This *karkhandar* makes furniture and building materials. The period from October to May forms his brisk season, while the rainy season is slack. The wages paid vary from 5 annas to Rs. 1–8–0 per day according to the skill of the workers.

Oil Mills.

33. The investigator interviewed the owner of an oil mill at Malegaon. He employs 4 artisans and 24 labourers, and the seeds crushed by him are groundnuts and castor. During monsoon,

business is slack. His main difficulty is the fluctuations in the prices of oil-seeds, which react on the value of his stock. He has an equipment worth about Rs. 12,000. The annual output is reported to be 4,000 maunds of groundnut oil, 600 maunds of castor oil, and oil-cakes. The oil and cakes are sold to petty dealers in the Malegaon and Baglan talukas. The wages paid to the artisans vary from 6 to 8 annas a day while the labourers are paid 4 annas each per day.

Soap-making.

34. There are reported to be two soap manufacturing *karkhanas* at Malegaon. The investigator interviewed the owner of one of these. In addition to the family members, two artisans are employed. Only washing soaps are prepared. For bar-soaps the price realised is Rs. 7-8-0 per cwt. and for the better type of soap in square or round cakes, the owner gets Rs. 14 per cwt. His total receipts come to Rs. 326 per month from the sale of both kinds of soap and it is estimated that he gets about Rs. 40 a month. The soap manufactured is marketed through agents and most of it is marketed outside. The owner complains against the competition from the large-scale organised factories which is stated to have affected his industry. He wants technical advice and financial assistance from Government.

Leather Industry.

35. At Nasik, the investigator interviewed two persons engaged in this industry: one an employer and the other an independent worker. According to them there are 9 to 10 shops, each of which employs 2 to 3 artisans; in addition, there are 50 to 75 independent artisans and a large number of outworkers. The articles are mainly shoes and *champals*. Like many other industries, the brisk season for this industry is winter and summer, and the slack period is the rainy season. The market is mainly local, but these artisans do not satisfy the entire local demand, a great part of which is being met by imports. There seems, therefore, room for developing the industry. The artisans, however, complain about severe competition of Japanese rubber and canvas boots, and of shoes and *champals* from Agra and Cawnpore. They suggest that the tanning industry should be encouraged at Bhagur, a village at a distance of 10 miles from Nasik where there are 50 to 60 families following tanning as a hereditary occupation, but who have no proper training.

Brick Kilns.

36. It is estimated that there are 17 to 18 brick-kilns in Nasik town with about 7 to 8 persons working in each. The total output of bricks per year is estimated to be about 40 lakhs. The bricks are sold at the rate of Rs. 8 per thousand. The kiln-owner, interviewed

is of opinion that there is not much scope for the expansion of the industry because the margin of profit is stated to be very low and secondly the industry being wide-spread, there is no chance of extending the markets.

Fishing.

37. The Census return gives 632 as the number of persons engaged in fishing. The industry is said to give employment to several backward class tribes in the district. The fishing methods which are employed are said to be most primitive. There is no close season and no restriction on the use of traps and small meshed nets, with the result that large quantities of fry are destroyed.

Rural Artisans.

38. The investigator visited 2 or 3 other villages, Rajapur in Yeola taluka, Zodage in Malegaon taluka, etc. The villages concerned have carpenters, rope-makers, gold-smiths, shoe-makers, blacksmiths and potters. Most of these artisans are paid, not in cash but in kind and they form an integral part of the rural economy. Their condition does not seem to be particularly different from that of the agriculturists of their villages.

Possibilities of New Industries.

39. The district does not seem to offer many possibilities for the development of new industries. Among those that have been suggested is tanning for which hides and skins and tanning materials are locally available. It should be possible to develop the tanning industry of the district by popularising the improved methods. Similarly there seems scope for toy-making on cottage basis as Nasik town being a pilgrim centre offers a good market for such articles. The fishing methods at present followed in the district by the backward tribes are said to be very crude and it should be possible to develop the industry by improved methods. Further *rosha* grass found in the forests of the district can also be utilised for the manufacture of scents. Finally, as pointed out by the yarn dealers at Malegaon, there is good scope for starting a spinning mill at Malegaon for the supply of yarn to the handloom weavers.

BOMBAY : PRINTED AT THE GOVERNMENT CENTRAL PRESS.

Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

POONA

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries

of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,
Chairman.

May 3, 1940.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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POONA.

Position and Area.

The district of Poona lies between 17° 54′ and 19° 24′ north latitude and 73° 19′ and 75° 10′ east longitude, and covers an area of 5,332 square miles. It is bounded on the north by the district of Ahmednagar, on the east by Ahmednagar and Sholapur districts, on the south by the Nira river, which separates it from the Satara district, and on the west by the Kolaba district.

Physical Features.

2. Towards the west, the country is undulating and intersected by numerous spurs of the Western Ghats which break off in a south-easterly direction becoming lower as they pass eastwards and in the end sinking to the general level of the plain. Along the Western border of the district, the Western Ghats form a barrier inaccessible except by a few difficult passes. Many streams rise in the Ghats and flow eastward until they join the Bhima which passes through the district from north-west to south-east. The main tributaries are on the left, the Vel and Ghod and on the right the Bhama, Indrayani, Mula and Nira.

Like all other districts which abut on the Western Ghats, Poona can be divided into distinct tracts. The western tract is rugged and hilly, the eastern tract a level plain with good soil but badly supplied with water, while the transition tract that lies in between these two, has a good soil and plentiful water supply.

Climate and Rainfall.

3. The climate of the district varies with the distance from the Western Ghats. Near the Ghats it is very moist and feverish in the rains but pleasant throughout the hot season. The temperature is kept down by cool breezes which extend to Poona itself. In the east the climate is healthy but hot. In the transition tract it is dry and invigorating.

The regular monsoon ordinarily breaks in June and stops in September, and is succeeded by the north-east rains which close in November. The rainfall varies in the different parts of the district. In the western part it is heavy and regular; in the central belt it is moderate and in the Bhimthadi and Indapur talukas on the east, it is very irregular. The average rainfall for the district is about 27 inches.

Population.

4. The district has a total population of 1,169,798 persons of whom 857,098 live in rural areas consisting of 1,132 villages while the remaining

312,700 are to be found in 12 towns. Of these, the more important towns are :—

	Population.
Poona	198,078
Poona (Cantonment)	35,807
Kirkee (Cantonment)	16,302
Baramati	14,170
Lonawala (including Khandala)	10,694

The percentage of urban population to total population is about 26·7.

According to the Census returns of 1931, the total number of principal earners in the district is 395,144 of whom 300,263 are males. The occupational distribution of that number is as follows :—

Exploitation of animals, vegetation and minerals.	251,707
Industry	41,853
Transport	6,788
Trade	21,236
Public force and administration	24,249
Professions and liberal arts	9,414
Living on their income	2,238
Domestic service	8,982
Insufficiently described	18,359
Unproductive	10,313
Total ..	395,144

The proportion of the industrially occupied persons to the total principal earners comes to 10·6 per cent. But not all the 251,707 persons shown against " exploitation of animals, minerals and vegetation " are engaged in cultivation. That figure can be further analysed as follows :—

Cultivation	240,763
Forestry	675
Stock-raising	9,125
Fishing, etc.	1,142
Minerals	2
Total ..	251,707

Thus there are 10,942 persons who are engaged in such occupations like forest industries, stock-raising and fishing, which are more or less industrial in their nature. Adding these, the total number of industrially occupied persons in the district comes to 52,800.

Health and Medical Facilities.

5. As regards health conditions the district appears to be normal. The mean ratio of births per thousand for the five years ending 1937 was 38·04 and the mean ratio of deaths for the same period was 26·99 per thousand. The survival rate for the district is thus 11·05 per thousand.

There are 12 hospitals, 23 dispensaries and 13 other medical institutions like leper hospitals, tuberculosis sanatorium, etc. Of the 12 hospitals, only one is maintained by Government, the rest being maintained by missions, from private funds, etc. Nine of the dispensaries are maintained by municipalities, four by the District Local Board and others by Government, missions, railways, etc. The number of doctors in the district excluding Poona City is, however, estimated to be only 42, thus giving a proportion of one doctor for every 21,800 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 128,709 persons were returned as literates thus constituting a literacy percentage of 11 for the district.

The educational facilities available in the district are summed up in the following statement for 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	965	79,740
Secondary (including lower secondary and English teaching) schools	56	14,556
Commercial, agricultural and industrial schools ..	13	881

Of the 1,132 villages in the district, 675 villages had schools in them.

Transport Facilities.

7. The Great Indian Peninsula Railway is the main trade route. The Madras and Southern Maratha Railway brings the Bhimthadi and Purandhar talukas within ready access of Poona and the Great Indian Peninsula Railway. The Dhond and Manmad Railway which joins the Great Indian Peninsula Railway at Dhond further facilitates communications. The district is comparatively well served with good roads. Motor services throughout the district afford a quick means of transport on all metalled roads leading from Poona.

The total mileage of roads in the district in 1937–38 was 428 miles of metalled roads and 789 miles of unmetalled roads.

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SURVEY OF RESOURCES : AGRICULTURE AND PASTURE.

8. The district has a total area of 3,427,658 acres of which 2,267,875 acres constitute the gross cropped area. Current fallows constitute 498,094 acres. Forests about 407,947 acres while other uncultivable land is 421,100 acres. There are 14,578 acres which are returned under culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area :—

	Area in acres. (1937-38.)
Rice	95,279
Wheat	70,239
Barley	1,155
Jowari	1,012,831
Bajri	481,645
Ragi	31,371
Maize	1,629
Gram	77,466
Other food grains including pulses	120,821
Linseed	661
Sesame (*til*)	6,048
Groundnuts	27,713
Other oil-seeds	103,123
Condiments and spices	10,127
Sugarcane	10,952
Cotton	17,912
Other fibres	1,955
Tobacco	928
Other drugs and narcotics	1,013
Fodder	158,888
Fruits and vegetables	35,669
Other miscellaneous crops	450
Total ..	2,267,875

It will be seen that the important commercial crops are groundunts, cotton and sugarcane. Among the food-crops, *jowari* is the most important.

In 1937-38 fruits and vegetables accounted for 35,669 acres. More details were obtained for these important crops from the Department

of Agriculture which supplied the following information in respect of 1938-39 :—

	Acres. 1938-39.
Vegetables—	
Potatoes	16,993
Sweet potatoes	1,645
Yam	87
Carrot	1,045
Radish	226
Onions	4,153
Others	110
	24,259
Green vegetables—	
Tomatoes	270
Fenugreek	847
Edible hibiscus	1,131
Musk melon	51
Water melon	61
Others	3,666
	6,026
Fruits—	
Plantain	1,155
Mango	96
Lime	473
Sweet lime	2,774
Oranges	1,683
Pomegranates	393
Guava	890
Fig	508
Papaya	210
Grapes	45
Others	58
	8,285
Total, Fruits and Vegetables ..	38,570

The area under fodder crops is nearly 159,000 acres. The district has many breeds of cattle of which the *khilari* or herd-cattle from West Khandesh are the most valuable. Buffaloes are common in all parts and are of several kinds but the best breeds are imported from Sind, Cutch and Gujarat. Flocks of sheep are found in most large villages and goats are common. According to the Census of cattle taken in 1934-35 the details of live-stock in the district are as follows :—

Bulls and Bullocks,	(working, breeding and young stock)		..	334,640
Cows		do.	..	249,469
Buffaloes		do.	..	17,557
Cow-buffaloes		do.	..	80,298
Sheep and goats	..	..	..	383,590
Horses and ponies	..	..	..	9,613
Mules	..	..	..	741
Donkeys	..	..	..	4,635

Of these, milch cattle number 181,733 consisting of 135,792 cows and 45,941 cow-buffaloes.

Survey of Resources : Minerals.

9. With the exception of iron, which occurs in various places or iron-clay, Poona has no metallic ores. Grains of metallic iron derived from the traps are frequently found in the beds of streams. The trap-rock almost everywhere yields good building stone and road metal. Dark blue basalt is also common. It is susceptible of high polish and is worked into idols, pedestals for wooden pillars and inscription slabs. Carbonate of soda is also found in a few places and is made use of by washermen for washing clothes. In the beds of almost all the rivers good sand for mortar is found. The limestones found in several places of the district are of superior quality. The lime produced from the stone of these quarries is said to be excellent for constructional purposes. The Gazetteer also states that near many of the streams, earth is found suitable for making bricks and tiles.

Survey of Resources : Forests.

10. The area under forests is 407,947 acres. In the forests on the sides and plateaus of the Sahyadri range, the mango, *bombax malabaricum*, teak, and bamboos grow abundantly. The teak occurs chiefly about ten miles off the main range of the Sahyadris. On the banks of many of the great rivers of the district the soil is alluvial and *babul* trees grow to a considerable height. The forests yield useful products like timber, grass, *shikekai*, *timru*, *harda* and honey.

Survey of Resources : Power.

11. There are four electric supply companies in the district. The figures of their output are given below :—

	Units generated. (000s)	Total Units sold. (000s)	Units sold for power purposes. (000s)
Poona Electric Supply Company Limited	8,682 (purchased from Tata's).	7,121	4,495
Lonavala-Khandala Electric Supply Company Limited	102 (do.)	83	19
Baramati Electric Supply Company Limited	68	59	18
Junnar Electric Supply Company Limited	(Supply not yet started).		

Survey of Resources : Capital.

12. There were 218 agricultural co-operative societies in the district in 1937-38, with an aggregate working capital of Rs. 25·92 lakhs. Besides these, there were 60 non-agricultural co-operative societies with a working capital of Rs. 31·8 lakhs. The District Central Co-operative Bank during the same year had a working capital of Rs. 49·19 lakhs. In addition, there were 129 postal savings banks in the district with 46,366 accounts current in 1937-38, and the balance to their credit at the end of the year was Rs. 94·15 lakhs. In the same year, cash certificates of the value of Rs. 27·81 lakhs were sold in the district. The Imperial Bank of India and the Bank of India have each got two branches at Poona while the Bank of Maharashtra and the Presidency Industrial Bank have their head offices there.

Industries in the District : General.

13. The population engaged in industrial occupations has been estimated at 52,800 including the 10,942 persons engaged in forest industries, stock-raising and fishing. Of those, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	321
Butchers	634
Tailors, milliners, etc.	2,799
Washing and cleaning	1,288
Barbers, hair-dressers	2,377
Scavenging	1,732
Total ..	9,151

The remaining 43,649 may be regarded as persons engaged in industry. The Census tables give the following classified statistics of the more important industries :—

Forest industries	675
Stock-raising	9,125
Fishing, etc.	1,142
Cotton spinning, sizing, and weaving ..	2,000
Rope, twine, etc.	3,347
Wool manufacture	839
Silk manufacture	677
Dyeing, bleaching, printing, etc.	136
Workers in leather	693
Carpenters	3,792
Basket-makers, etc.	1,075
Blacksmiths, workers in iron, etc.	1,199
Workers in brass, copper and bell-metal ..	217
Potters and makers of earthenware	2,386
Brick and tile making	158
Manufacture and refining of vegetables ..	766
Rice pounders, huskers, etc.	232
Sweetmeat and condiment makers	716.
Manufacturers of tobacco	289
Boot, shoe, etc., making	3,744
Lime burners	3,794
Repairs of motor vehicles, cycles, etc. ..	288
Printers, book-binders, etc.	243
Jewellers and ornament makers	1,836
Other miscellaneous industries	4,280
Total ..	43,649

Of these, 8,464 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement

gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund ..	10	12	5,379	4,806
Textiles	1	3	862	1,608
Engineering	6	23	403	695
Minerals and metals ..	1	....	15	....
Food, drink and tobacco ..	....	3	....	84
Chemicals, dyes, etc. ..	....	1	....	42
Paper and printing ..	16	32	1,339	1,851
Processes regarding wood, stone and glass ..	1	6	191	381
Miscellaneous	....	3	....	398
Seasonal factories ..	6	14	275	678
Total ..	41	97	8,464	10,543

14. The investigator, Mr. N. M. Joshi, spent 18 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Handloom Weaving.

15. The condition of the handloom weaving industry in this district was studied at Baramati, Junnar and Poona. At Baramati and Junnar there has been a steady deterioration in the quality of production. Formerly, *dhoties* and *uparnis* were a speciality of Baramati and Junnar mostly concentrated on *ilkal* and other types of *sarees* demanded by the upper classes of society. At present at both these places, coarse count *sarees* worth Rs. 2 to Rs. 3 and used by village folk are produced. The Junnar weavers mostly use yarn of 2/40s for warp and 20s for weft in different colours, the most common being red and green. It is estimated that an average family at both these centres, can produce 3 *sarees* in a week and that their income from this occupation is about

Rs. 1-8-0 a week. The average output of *sarees* per week is 100 to 125 at Baramati and about 50 at Junnar. Some thirty years back there were 500 handlooms at Junnar. Their number has now dwindled to 12 to 15. The products are mostly marketed by the local dealers to petty traders of the surrounding villages.

16. At Poona the investigator met 4 *karkhandars* and about 45 independent workers. The *karkhandars* own about 8 to 10 looms each and the independent weavers own a loom or two. The cost of a loom with its equipment is stated to be Rs. 25. The products are *paithanis*, fancy *patals*, *pitambars*, *kads*, etc. The weaver of a *paithani* gets about Rs. 6 to Rs. 8 a month. In addition, the family members get their remuneration for the preparatory processes.

17. The main grievance of the artisans at all these centres, is reported to be the keen competition of power-loom production. The weavers therefore plead for some restriction on the production of *sarees* and *patals* on the power-looms. They also want that arrangement should be made for supplying them raw materials at cheap rates and that the marketing facilities should be improved and extended. The weavers appear to be eager to be trained in the production of new designs.

Hosiery Products.

18. Of the three hosiery works visited by the investigator at Poona, two employ about 15 wage-earners each while the third employs only 5 workers.

The raw materials used are cotton yarn, dyes and bleaching materials mostly imported from Bombay. There is a general complaint against the octroi duties levied by the municipality on the raw materials. Among the knitted articles undershirts are the main products. These are marketed in Bombay City and the Deccan by personal canvassing and through agents who are paid a commission of 5 per cent. on selling prices. The three *karkhandars* together produce annually goods worth about Rs. 6,500. Demand for knitted articles is somewhat brisk during the winter and the rainy season. All the *karkhandars* are reported to earn a good margin of profit on their production. The industry is capable of further expansion, if it is protected against Japanese competition. It is also suggested that the availability of capital at low rates of interest and improvement of marketing facilities would give a great stimulus to the industry. The smaller industrialists especially are reported to be finding it difficult to get financial accommodation at economic rates.

Dyeing and Printing Work.

19. The investigator visited a dyeing and printing establishment at Poona started about 2 years ago. Three members from the family are engaged in it. The equipment consists of a few dies, a bronze gauge and stencils. The whole work is done by hand. The materials used are dyes and chemicals and about Rs. 15 are spent on them per month.

Dyeing and printing is done to meet local and outside orders. Work directly for the market on their own initiative is not undertaken on account of the uncertainty of the demand. The net income of the family from this work is reported to be about Rs. 40 to Rs. 45 a month. The *karkhandar* wants capital at low rates of interest and also technical assistance.

Brass and Copperware Industry.

20. This is an important industry of Poona. According to the information supplied to the investigator by the Gokhale Institute of Politics and Economics, Poona, which carried out investigations into the different industries in the Poona City in 1936 there are 217 *karkhanas* engaged in the brass and copperware industry in Poona City. These can be classified under three main categories : (i) completely mechanised, (*ii*) partially mechanised and (*iii*) non-mechanised. There is only one *karkhana* of the first variety, 58 of the second and the rest are of the third. It is estimated that in the Poona brass and copperware industry 80 per cent. are engaged in brassware, 12 to 13 per cent. in copperware and the rest in German silver, aluminium, etc. These are exported to the Central Provinces, Mysore, Karachi and other parts of the Bombay Province.

(*i*) *Completely mechanised karkhana.*

21. There is one large power pressing factory with a rolling mill plant. It is a private limited company with a working capital of Rs. 8 to Rs. 10 lakhs. The concern makes its purchases of raw material through its Bombay agents. Copper and brass sheets and scrappings are also used. Though machinery is used for a majority of processes, some of the hand processes still persist in a few lines of production, e.g., buckets. The factory produces on a large scale brass and copperware for stock, while utensils of German silver, aluminium and iron are produced only to meet orders. The finished goods are sent to dealers all over the Province. The local sales are made through the shop of the concern. The articles are manufactured by means of die-processes through which they pass before they are planed, joined and polished. About 175 operatives are employed on wages varying from Rs. 15 to Rs. 20 per month.

(*ii*) *Semi-mechanised karkhanas.*

22. These 58 *karkhanas* produce cast metalware. Altogether they give employment to about 375 persons. Out of these, four *karkhanas* produce dining plates and one specialises in betel-nut containers. Four more are Government contractors manufacturing weights and measures and about 35 carry on work on contract as outworkers. The rest are independent workers.

The wage earners usually work for 9 hours. They are paid from 10 annas to Re. 1-8-0 per day according to the nature of the work.

There is no uniformity about the system of payment of wages in the trade. Advances, however, are freely given. No female labour is employed, though children are employed. The working conditions are reported to be extremely unsatisfactory and the incidence of sickness high.

(iii) Non-mechanised karkhanas.

23. The remaining 158 *karkhanas* give employment to about 465 persons. About 40 per cent. of the units employ more than 4 men. These introduce division of labour and are in a position to have better remuneration and comparatively secure financial position. Their products consist almost exclusively of beatenware from castings and brass and copper sheets. These latter have almost completely ousted the indigenous castings and now the beatenware is made mostly from sheets shaped and beaten into a variety of articles. The sheets are imported from Bombay. Almost all these artisans are outworkers for dealers who give them *bhangar* (old scrap metal) and brass and copper sheets as in the other centres. There are about 45 dealers in Poona City who distribute work to these outworkers. Due to the competition of machine-made polished ware, the market for beaten-ware has declined and consequently regular work is not provided by the dealers. The economic condition of the outworkers is stated to be extremely unsatisfactory. To cheapen the articles old utensils are repaired and polished and kept for sale. But this work hardly gives 12 annas per day to the *karkhandars*. They get advances from the dealers and are therefore bound to work for the dealers at wages which are fixed without any consideration of the living condition of the workers. The outworker in his turn follows the same system in regard to his assistants. These outworkers receive 16 seers of raw materials and have to give back 12 seers of finished articles and get wages for 12 seers. He has to return the filings to the shop-keeper. When the accounts are made up, annas and pies are usually struck off. Two per cent. is then deducted from the bills as discount. And if the work is not returned in the stipulated time a charge by way of interest on capital locked up in raw materials, is deducted from the wages. In addition to these deductions, one anna for *dharmadaya* is also taken from the outworkers.

24. The industry has two associations, viz., Brass and Copper Merchants' Association and the Bhandi Kamgar Sangh. The former is the new form of the Mahajan Sabha of the olden times. It was registered in 1934-35 as a limited concern. The objects of the Association are: (1) to foster the trade in brass and copperware, (2) to arbitrate in the case of dispute between local and outside merchants, and (3) to secure redress of grievances regarding railway freights, municipal taxation, etc. The Association also controls conditions of production and to some extent wages. The Association covers a large number of shop-keepers and by levying fees for new entrants into the industry it is almost acting like a handicraft guild. The Bhandi Kamgar Union was registered in

1936. It is started with the object of safeguarding the interests of the workers.

25. About two decades back, the Poona brass and copperwares had a wide market extending to the Nizam's Dominions in the south and the United Provinces in the north. Most of these markets are now lost due to the competition from several other centres in the Province. To improve the present position of the industry the following suggestions are made. The railway freights are said to be heavy and discriminating and it is suggested that they should be systematised. The artisans also complain about the octroi duties levied by the municipalities. A third problem is that of motive power. Both the completely and partially mechanised *karkhanas* purchase power from the Poona Electric Supply Company whose charges are fixed on a sliding scale. It charges lower rate on larger consumption. This is stated to still further weaken the competitive capacity of the smaller *karkhanas*. Apart from this the partially mechanised and non-mechanised *karkhanas* complain that they cannot compete with large-scale factory production. The whole industry is stated to be suffering from the competition of the machine products of Bombay. Lastly, the outworkers and independent artisans want to be supplied with capital at low rates of interest and training in new designs and articles.

The Production of *Udbattis*, Scents, etc.

26. Poona is an important centre of scent production. Here the investigator interviewed 6 *karkhandars* who employ nearly 300 wage-earners during the working season. Most of the workers are women, working either on daily wages or piece-wages and earning about 6 annas per day. The rainy season is slack time for the industry and due to climatic conditions production in many lines is not undertaken during that season. The raw materials are partly imported from Bombay and partly locally purchased. Generally speaking hand appliances are used for powdering and grinding the raw materials. A few *karkhanas*, however, take the help of mills for grinding the *udbatti* material. The finished products are in the main *udbattis*, *kumku*, pomade, and scented oils. Of these *udbattis* by far predominate. The annual production of *udbattis* of the 6 *karkhandars* interviewed is estimated at Rs. 50,000. The products are sold to merchants of Poona, Nagpur, Hyderabad, Burma and Bombay. Sometimes they are even sent to Africa.

27. The *karkhandars* state that they have to face severe competition from Mysore. Some of the bigger *karkhandars* also complain of competition from cheap inferior local articles. Apart from this the municipal octroi duties are said to act as a deterrent to the growth of the industry. The *karkhandars*, therefore, suggest that the octroi duty should either be abolished or at least a rebate should be given on exports.

Soap Industry.

28. The investigator interviewed three owners of soap factories at Poona. Two of them employ more than 10 workers and the third has

five wage-earners to assist him. The wage-earners are generally paid from Rs. 10 to Rs. 25 a month. The biggest of these three *karkhanas* has an equipment costing about Rs. 1,300. The materials used in the industry are caustic soda, sodium silicate, cocoanut oil, resin, paper for packing purposes and wooden boxes. Generally these materials are directly imported from Bombay but sometimes the smaller industrialists find it convenient to purchase them locally. All the *karkhandars* produce washing soap which is marketed through the local dealers. The production is generally on a larger scale in summer. The biggest *karkhandar* sends his soap to dealers of Sholapur, Belgaum and Kolhapur. A commission of 4 per cent. is generally allowed to all dealers. The total value of the production of all the three *karkhandars* is estimated at about Rs. 2 lakhs a year.

29. The *karkhandars* state that the industry pays if the size of production is sufficiently large to reduce the overhead costs. They, however, protest against the municipal octroi duties on imports of raw materials, and suggest that the duty should be refunded at least on the exports of soap. They also want that the import duties on foreign chemicals should be removed.

Toilet Products.

30. The investigator interviewed three manufacturers of toilet products. Two of them follow this as a subsidiary industry. The production is on a small scale and one or two wage-earners are employed on a monthly wage of Rs. 12 to Rs. 15. The investigator reports that the manufacturer who is following this industry as his only occupation has invested nearly Rs. 5,000 in it. His annual production is stated to be worth about Rs. 1,200. The raw materials of the industry are vaseline, paraffin, scents, cocoanut and sweet oil, labels and bottles. They are generally purchased by personal visits to Bombay. The finished products are brilliantine, snow, cream, hair oil, rose water, etc. The annual production of the three manufacturers is worth about Rs. 2,000. Most of it is locally consumed but a good part is exported to Bombay and Kolhapur dealers. *Diwali* is the season for pomade and hair oils while rose water is much in demand during the marriage season.

31. The main difficulty in the way of the industry is stated to be the competition from cheap imitation products, both Indian and foreign, especially Japanese. As a result, it is reported that some of the manufacturers have been forced to resort to the production of inferior products.

Paper Industry.

32. Junnar was once a well-known centre of the paper industry. The investigator reports that about 30 years back there were nearly 50 *karkhanas* here. But due to competition from mill-made paper the industry has rapidly decayed and only five *karkhanas* are left now. The investigator interviewed all the five *karkhandars*. He reports that on an average a *karkhana* employs 5 workers in the premises and 5 to 6 outworkers.

33. Blotting paper and white polished paper (26″×26″) are prepared from old and useless paper. The annual output per *karkhana* is about 100 to 125 *gaddies* (of 240 sheets each), and on each *gaddy* they are reported to get a net profit of about Rs. 1-8-0. The paper is generally sold to merchants for their account books in different parts of the Deccan. The *karkhandars* want Government to supply them the old and useless records from Government offices at low prices for use as raw material for their industry. Assistance in technical improvement in sizing, polishing, etc., is also asked for. Their main difficulty, however, is stated to be to find out markets for their produce. At present their higher costs of production, are reported to be coming in the way of marketing their paper. It is, however, stated that since last year the local industry has received some encouragement from Government.

Envelope Industry.

34. The investigator visited two establishments at Poona where envelopes are manufactured. One of these, has a working capital of about Rs. 10,000 and uses power. About nine people are employed here. The other establishment employs only one worker. Here the whole of the work is being done by hand. The owner of the bigger establishment uses foreign paper, because of cheapness. For preparing files, however, Indian paper is used. The annual expenditure on paper, glue, etc., is estimated to come to about Rs. 4,000. The envelopes and files fetch about Rs. 7,000. The small producer prepares envelopes and scribbling blocks worth about Rs. 800. He finds its difficult to compete with his business rival as will be evident from the following cost figures :—

Cost of production of envelopes.

	Hand processes (1,000 envelopes).	Power processes (1,000 envelopes).	
	Rs. a. p.	Rs. a. p.	
Paper (6 lbs.)	1 2 0	1 2 0	
Wages	0 8 0	0 4 0	(including power charges.)
Rent, depreciation, etc.	0 1 0	0 2 0	
Total cost ..	1 11 0	1 8 0	
Sale proceeds ..	2 0 0	2 0 0	
Margin ..	0 5 0	0 8 0	

It will be noticed that the cost of production is less in the power-using establishment. It is reported that the cost would have been still lower

if the machinery had been given full work. At present due to lack of sufficient capital, the machine is stated to be used for only two hours in a day. This manufacturer needs Rs. 25,000 to improve his equipment and work it for longer hours. Secondly, he faces competition from foreign imports. The small producer wants encouragement from Government and requests that all Government departments should use only hand-made envelopes made of Indian paper.

Dry Cell Batteries.

35. The investigator interviewed the proprietor of the only dry cell batteries *karkhana* at Junnar. Here about 10 persons are employed on monthly wages varying from Rs. 10 to Rs. 15 each. The *karkhana* is on a handicraft basis. The tools and appliances are reported to have been made by the *karkhandar* himself. It is said that it took him nearly 4 to 5 years to complete them. The various chemicals and minerals used in the industry are mostly imported from Germany, Java, Belgium or Poland. The dry cell batteries manufactured, are marketed through agents throughout the Province. The investigator was informed that during the past three years the profits were about 1,500 to Rs. 2,000 a year. It seems that the business is being run on profitable lines.

36. The manufacturer points out that there is a good scope for the industry as the annual imports of dry cell batteries into the Bombay Port alone are worth about Rs. 5 lakhs. He wants an additional capital to the extent of Rs. 10,000, so that he can increase his own annual production by about Rs. 35,000. His present investment in the industry is said to be only Rs. 3,000. Another need for the expansion of the industry is the supply of improved instruments. He suggests that Government should supply this need through their own workshops. A third need is stated to be the establishment of an expert organisation for the supply of commercial intelligence. Some of the suggestions made by the manufacturer are: (1) free supply of expert technical advice to small industrialists, (2) maintenance of a good library of technical books and (3) an organisation for advertising and marketing goods manufactured by small industrialists like him.

The Furniture Industry.

37. According to the investigator there are in Poona 4 or 5 big furniture shops employing about 30 workers. He visited two of these. He also interviewed a small manufacturer and an outworker, both of whom are assisted by about 2 or 3 workers. During the busy season which extends from January to June more workers are usually employed. Materials used are Malabar teak, polishing materials, nails, hinges, glass and fittings. Only the bigger concerns sometimes import wood direct from Bombay, otherwise the raw materials are locally purchased. The general custom in the industry is for the workers to bring their tools and appliances with them. No machinery is employed. Mostly,

office and home furniture is prepared and the greater part of it is sold in the district itself. One of the bigger firms visited has developed a business in hiring out furniture.

38. The bigger *karkhandars* are well off. Some of them pay income-tax. The out-worker interviewed, gets Rs. 50 a month. It is pointed out that the octroi duty on imports of wood and other articles stands in the way of the industry and should, therefore, be abolished.

Preparation of Toys.

39. The investigator reports that there are 5 or 6 *karkhanas* employing 25 to 30 workers in toy making at Poona.

Children's playthings, of various shapes and sizes such as toy elephants, horses, motor, etc., are prepared out of plywood, and other materials. Cheap plywood is generally obtained from empty packing cases. These are mostly produced to meet the orders received from the district and outside.

40. The main difficulty in the way of these producers is finance. As they have not enough funds to purchase the necessary raw materials, they are unable to accept big orders from schools, municipalities, etc. As these institutions do not give advances, the *karkhandars* desire that finance should be given at low rates of interest. They also want that Government should widely advertise their products. They further suggest that educational institutions should particularly be encouraged to coach young and impressionable minds with the aid of toys such as are produced by them.

Ivory Combs.

41. The preparation of ivory combs is an old industry of Poona. The Gazetteer notes that these combs had a good local demand at one time. The investigator, however, reports that at present only three families are engaged in this industry. He interviewed a member of one of these families. The equipment of the family consisted of simple tools worth about Rs. 100. Last year, this family imported 100 lbs. of ivory worth about Rs. 800 from Bombay and combs, bangles, dices, etc., were prepared. Ninety per cent. of the product was sent to the Karnatak and the rest was sold locally. The total sale proceeds were nearly Rs. 1,500. It is stated that there is a brisk demand for ivory combs and bangles during the marriage season.

42. According to the artisans, the main reason for the decay of the industry at Poona, is the competition from bone and celluloid products. The prices of these competing products are reported to be 50 per cent. lower than theirs. The artisans want training in the production of modern and marketable patterns, as is given in the States of Mysore and Travancore. Financial assistance at low rates of interest is also stated to be necessary. Lastly, they want Government to advertise and find markets for their goods.

Biscuit-making.

43. The investigator visited a biscuit manufacturer at Poona. Here about 14 wage earners are employed on wages varying from 3 annas to a rupee per day. Biscuits are prepared from wheat flour. Sugar, ammonia and *ghee* are also used. The owner stated that he spends about Rs. 700 a year on raw materials. The biscuits are consumed in Poona and the Deccan. It is reported that the demand is greater for the cheaper products. Due to severe competition from cheap biscuits no new kinds of costly biscuits are prepared. The manufacturer considers it somewhat hazardous for a small concern to carry on experiments. The *karkhana* is stated to be not making any profits due to severe competition from imported and locally prepared cheap biscuits.

Food Industries.

44.. The investigator visited a concern where wheat flakes, *ragi* products, pickle powder, betelnut pieces, pasting materials, etc., are prepared on a cottage basis. The owner states that he finds it difficult to get small ready-made machines to help him and that to specially order such machines from foreign countries is beyond his means. Another great handicap in the development of his industry is reported to be the difficulty of getting air-tight containers at economic rates. He also points out that there is no organised industry for the supply of packing articles. He suggests therefore that the possibilities of developing this line of industry should be investigated. As an aid to his industry the manufacturer also wants Government to buy his products for use in jails and hospitals.

The Production of Snuff.

45. There are nearly 35 *karkhanas* at Poona, which prepare snuff on a large scale. They provide work for nearly 500 to 700 wage earners. One of these is equipped with a 9 H.P. engine and all others use the time old methods. An average worker by working 9 to 10 hours a day can earn about 8 annas daily. Tobacco is imported from Nipani, Belgaum, Gujarat, Nagpur, etc., at rates varying from Rs. 70 to Rs. 90 per *palla*. The tobacco from Nipani and Belgaum is stated to be superior and that better quality snuff can be produced out of it. It is reported that the *karkhandars* get a profit of about 6 per cent. to 8 per cent. The snuff is sold throughout Maharashtra. All the *karkhandars* complain about the octroi duties and the licence fees.

Ayurvedic Products.

46. The investigator visited two establishments where ayurvedic product are prepared. One of them is run on a big scale and produces oils, *asavas*, *bhasmas*, ointments, etc., to the extent of Rs. 84,000 per annum. The equipment of this establishment is worth about

Rs. 2,000. The other is small and employs only one labourer. The different ayurvedic products are made from herbs, roots, minerals, etc. The products are said to be particularly popular in the Central Provinces, Maharashtra and the Karnatak. The bigger *karkhandar* stresses the necessity of Government using his products in Government hospitals and dispensaries. Finance at low rates of interest is reported to be necessary. It is further urged that the octroi duties levied by the municipalities should be substantially reduced.

Oil-seeds Crushing.

47. The investigator reports that some 20 years back, there were about 125 oil-seeds pressing *ghanis* at Telegaon Dabade and about 40 *ghanis* at Talegaon Damdhere. But with the rise of the oil expellers, the *ghanis* have decreased in number and to-day only 15 are left at Dabhade and about 30 at Damdhere. Though the decline of the industry at the latter place does not seem to be so great as at the former place, the oil is now crushed there for 3 to 4 months only in a year while in former times, the *ghanis* used to work for 10 months. Almost all the *telis* interviewed are poor and have to borrow funds for purchasing their raw materials from the dealers in oil. Sometimes the dealers and agriculturists provide the raw material and take back the oil and oil cakes, giving the *teli* about 5 to 6 annas per 16 seers of *til* or *karadi* seed. Generally the oil and cake are sold to local dealers on a wholesale basis. Formerly, the markets were wider and the products were sent outside these localities. It is reported that the industry is running at a loss.

48. There is now not much demand for the edible oil crushed in country *ghanis* as mill oil is becoming more and more popular on account of its cheapness. The fact that there is still some demand for oil cakes for use of cattle is alone said to be responsible for giving some respite to the *telis* at Dabhade. And the demand for *khardi* oil which is not crushed in mills has kept alive the *ghani* business at Damdhere.

49. To improve their condition the *telis* request Government to provide them finance at cheap rates. At present on retail purchase of groundnuts they pay about 8 annas more per *palla*. They also want that wholesale purchases should be arranged through a co-operative society or some other organisation so that they can get their oil-seeds cheaper. Secondly, it is suggested that Government should effect improvements in the *ghani* with a view to improve the quality of the groundnut oil, without spoiling the quality of the cake. The *karadi*-seed crushers also stress the necessity of bringing about improvements in winnowing, sifting, grinding, etc. of *karadi* seed. Lastly, the *telis* unanimously demand some restriction on the production of oil in mills. According to them their industry can have no future without such restrictions.

Tanning.

50. The investigator reports that the number of independent tanners at Talegaon Damdhere is about 21. It is reported that this number is constant for the last 10 years. About two years back the prices of

leather were high and the prospects for the tanners were somewhat brighter. They, therefore, requisitioned the services of the demonstration party of the Department of Industries and learnt the improved methods of tanning. When prices are favourable, sheep and goat skins are tanned at present according to these new methods. Even in the case of sheep and goat-skins, prices during the last two years are reported to have been unfavourable. The monthly income of a tanner's family is estimated to be Rs. 25 to Rs. 30. The chief difficulty of the tanners of this place is deficiency of water supply. Especially in the dry season, water is scarce. The tanners urge, therefore, that Government should provide them with adequate water supply.

51. Most of the finished hides are utilised by the *Dhors* themselves in the manufacture of *mots* which are used in the surrounding areas for lift-irrigation purposes. The manufacture of *mots* is the predominant occupation of most of these tanners. For preparing ten *mots*, twenty hides are required. On an average the annual output of *mots* per family is about 100 to 125. It takes a family about twenty days to prepare 10 *mots* which fetch Rs. 15. In addition to this *mot* work, the tanners get about Rs. 25 to Rs. 30 in a year from repairs of *mots*.

The Production of Bricks.

52. There are reported to be about 19 kilns at Poona which prepare bricks. On an average a *bhatti* (kiln) produces annually 2 lakhs of bricks. It is reported that about 400 potters get their livelihood from this industry. For preparing one thousand bricks, 3 cart loads of clay, 1 cart load of ash, ½ cart of lime are required. The clay is brought in carts from the neighbouring villages. The bricks are sold for about Rs. 13 to Rs. 14 per thousand. During the last few years demand for bricks is stated to be rather brisk due to intensive building activity.

53. The Poona brick makers are facing competition from their rivals at Dapodi, Pashan, Sangamvadi, and other villages near Poona. The latter sell their bricks at Rs. 10 to Rs. 11 per thousand. Moreover, as the clay in these centres contains more lime, they look more attractive and the Poona contractors are reported to generally prefer these cheap products to the local ones. The Poona artisans, however, question the durability of these competing products.

Pottery.

54. Pottery is one of the decaying industries of Poona. At present there are said to be nearly 30 families of potters engaged in it. Clay is imported from neighbouring villages like Katraj, Kondhave, Vithalwadi, etc., at the rate of Rs. 1-8-0 per cart and flower pots, *shegdis*, crude-oil lamps, etc., are prepared out of it. About 3 to 4 flower pots can be prepared in a day by one man. The potters complain that day by day their condition is becoming desparate. They point out that brass and copper vessels have replaced the earthen pots. Further

earthern *shegdis* have been replaced by stoves and iron *shegdis*. According to these artisans the prospects before their industry are very gloomy.

Rope Making.

55. The *Mangs* of Bhamburda who carry on this industry number 400 to 500. They also prepare broomsticks. The daily output of ropes at this place is estimated to be worth about Rs. 200. The rainy season is slack time for this industry. Ropes are made out of the fibres of *ghaipat*, *ambada* and *tag*. Formerly these fibres were sold at the rates of Rs. 20 per *palla* (120 seers). They are now sold for Rs. 12 to Rs. 14. But the *Mangs* are so poor that they can hardly purchase more than 12 seers of these fibres at a time.

56. The equipment of a rope-maker, consists of two ordinary wooden instruments and does not cost much. A family can prepare ropes of about Rs. 2 per day. Out of this amount about Rs. 1-10-0 represents the cost of raw materials. The ropes are partly sold to the local dealers and partly by hawking them in the neighbouring localities. An average family of 4 workers, is estimated to earn from Rs. 9 to Rs. 10 per month. The demand for ropes is stated to be steadily going down due to the decay of cart transport, diminishing purchasing power of the peasant and increasing use of the imported metal wire and machine made ropes.

Basket-making.

57. There are nearly 50 families of *Buruds* (basket makers) at Poona. Some of them specialise in preparing *udabatti* sticks while some others produce only fruit baskets. The rest produce sieves, flower baskets, etc. The raw material is obtained by a few artisans from Itarsi, Khamgaon or Mawal, but most of them purchase their raw material locally. It is estimated that on an average an artisan earns about Rs. 25 a month.

Possibilities of New Industries.

58. The district has a large area under fruits and vegetables, and it should be possible to develop a good fruit canning and preserving industry in the district. Similarly many of the small concerns in the district find it difficult to get packing material like cardboard boxes, cartons, etc. and there seems to be a good scope for starting an industry to meet these requirements. There is also a good demand for various articles of cutlery in the district and these can be manufactured in the district itself. There seems to be a good market for dry cell batteries and the manufacture of these started at Junnar can be extended. The investigator also reports that a concern is being started at Poona for the manufacture of incandescent lamps.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

RATNAGIRI

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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RATNAGIRI.

Position and Area.

The district of Ratnagiri lies between 15° 44′ and 18° 4′ north latitude and 73° 2′ and 73° 57′ east longitude and covers an area of 3,989 square miles. It is bounded on the north by the State of Janjira and Kolaba district; on the east by the district of Satara and the State of Kolhapur; on the south by the State of Savantwadi and Portuguese Goa; and on the west by the Arabian Sea.

Physical Features.

2. The district is generally rocky and rugged. Near the coast it consists of bare plateaux, intersected by numerous creeks and navigable rivers. These rivers and creeks have along their banks the chief sea-ports and almost all the fertile land of the district. The Western Ghats, sometimes rising to a height of 4,000 feet, lie on the eastern boundary of the district and are parallel to the coastline on the west. Often the width of the district is only 30 to 45 miles. Excepting for the Savitri, the other rivers are not of any great importance; they are all reported to be ill-suited for irrigation, though they afford facilities for navigation.

Climate and Rainfall.

3. The climate of the district though moist and relaxing is on the whole healthy. The rainfall is abundant and comparatively regular. Along the coast the average annual rainfall varies from 80 to 105 inches but farther inland it rises to over 140 inches and in the Ghats it is still heavier.

Population.

4. The district has a population of 1,302,527 persons of whom 1,211,376 live in rural areas consisting of 1,306 villages while the remaining 91,151 are to be found in 5 towns. The important towns are :—

	Population.
Malvan	29,817
Ratnagiri	23,906
Vengurla	20,158

The proportion of urban population to total population is 6·9 per cent., which is much below the provincial average. The district is, therefore, essentially rural in character.

The Census report of 1931 shows 466,142 as the total number of principal earners in the district. Of these, 294,125 are males. The occupational istribution of the total number is given below:—

Exploitation of animals and vegetation	404,937
Exploitation of minerals	155
Industry	22,455
Transport	6,653
Trade	10,594
Public force and Administration ..	4,287
Professions and Liberal arts ..	4,576
Living on their income	1,911
Domestic service	4,848
Insufficiently described	3,933
Unproductive	1,793
Total ..	466,142

It will be seen from the above that the industrially occupied proportion of the total earners is 4·8 per cent. only. But the number shown under the Census classification of "exploitation of animals and vegetation" does not, however, only represent cultivation. That figure can be further analysed as follows:—

Cultivation	381,489
Forestry	193
Stock-raising	8,713
Fishing, etc.	14,542
Total ..	404,937

It will thus be seen that 23,448 persons are engaged in occupations like forestry, stock-raising and fishing which are more or less industrial in their character. Adding these, the total number of principal workers in the district who are industrially occupied comes to 45,903.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births for the quinquennium ending 1937 was 34·48 per thousand, while the mean ratio of deaths for the same period was 19·82 per thousand. The survival rate thus comes to 14·66 per thousand.

There is one hospital maintained by Government at Ratnagiri town and nine dispensaries in the district. Besides these, there is a leper hospital at Ratnagiri maintained by the District Local Board. Of the nine dispensaries, three are maintained by municipalities, four by the District Local Board, one by a mission and one by a private body. There are 61 doctors in the district of whom 12 are in the town of Ratnagiri. The proportion of the doctors to the population in the district exclud ng Ratnagiri town, comes to one for every 26,200 persons.

Literacy and Educational Facilities.

6. The Census returns of 1931 show the number of literate persons as 85,093 thus constituting a literacy percentage of only 6·5 for the district.

The educational facilities in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary Schools	796	59,819
Secondary (including lower secondary and English teaching) Schools.	31	4,544
Industrial, commercial and agricultural Schools.	2	264

Of the 1,306 villages in the district, only 532 villages had schools in them.

Transport Facilities.

7. There are no railway lines in the district. Most of the coastal towns are, however, served by regular steamer services which run for about nine months in the year. There are also good roads from Ratnagiri to Kolhapur, Kolhapur to Devgad, etc. Motor-bus traffic has very much increased in recent years and practically all towns are now served by bus. The total length of roads maintained by Government and the local authorities in 1937–38 was 956 miles of metalled and 1,048 miles of unmetalled roads in the whole of the Ratnagiri division which for Public Works purposes includes a part of the Kolaba district also.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 2,564,322 acres of which 803,894 acres constitute the gross cropped area. Forests absorb about 12,436 acres while other uncultivable land measures 723,632 acres. Current fallows constitute 1,051,002 acres. Culturable waste or land which is theoretically available for cultivation is 9,327 acres. Details of the

classification of the cultivated area for the year 1937–38 are as under :—

	Area in acres. 1937–38.
Rice	300,658
Ragi	193,117
Other food-grains including pulses ..	157,351
Sesame (*til*)	13,597
Cocoanut	13,242
Other oil-seeds	3,776
Condiments and spices	1,910
Sugarcane	802
Fibres other than cotton and jute ..	5,457
Drugs and narcotics other than tobacco .	2,429
Fodder	99,372
Fruits and vegetables	12,167
Other miscellaneous crops	16
Total ..	803,894

It will be noticed that there are no important commercial crops in the district. The main food crops are rice and ragi. The area under fruits and vegetables was 12,167 acres in 1937–38. More details were obtained regarding these important crops from the Department of Agriculture which supplied the following information in respect of 1938–39 :—

	Area in acres. 1938–39.
Vegetables—	
Sweet potatoes	64
Radish	120
Others	177
	361
Green vegetables—	
Edible hibiscus	115
Water melon	209
Others	711
	1,035
Fruits—	
Plantain	636
Mango	7,489
Kaju	2,391
Others	52
	10,568
Total, Fruits and Vegetables ..	11,964

The district has more than 99,000 acres under fodder. The pasturage of the district is, however, poor and devoid of nutriment. The local breed of cattle is inferior, the only good breed of cows or buffaloes in the district being the one imported from Jafrabad from South Kathiawar. Sheep and goats are also of inferior breeds and even imported breeds deteriorate rapidly in the district. According to the Census of cattle taken in 1934–35, details of live-stock in the district are as follows :—

Bulls and Bullocks	(working,	breeding	and young stock)	331,375
Cows	(do.	do.	)	227,546
Buffaloes	(do.	do.	)	47,321
Cow-buffaloes	(do.	do.	)	73,087
Sheep and goats	..	..	..	55,248
Horses and ponies	..	..	..	254
Donkeys	..	..	..	231

Of these, 163,964 are milch cattle consisting of 121,766 cows and 42,198 cow-buffaloes.

Survey of Resources: Minerals.

9. The Gazetteer mentions that gold was stated to have been found near Phonda at the foot of the Sahyadris. All the laterite of the district is stated to be charged with iron but in too small quantities, to make smelting worthwhile. Iron ore is found near Malvan and the Gazetteer states that the mines at Malvan and Gothna were worked in former times. Smelting of iron is also reported to have been carried out about the year 1844 at Masura, Kalavali, Varangaon and some other villages. A Mineral Viewer sent in 1855 to examine the Malvan and Savantwadi mines is reported to have stated that superior iron could be obtained from these mines but that due to want of coal the quantity would be always small. The stones used for building purposes are blue basalt or trap and laterite. Sand or gravel of a good quality is found in the beds of most streams and rivers. The metallic sand used for drying ink, is found at the mouths of several of the rivers. A superior kind of red clay fit for manufacture of superior type of pottery is also reported to be found at Malvan. The other mineral products found in the district are talc, limestone and clay. Recently sand mines yielding a kind of sand useful in the preparation of silicate have been found at Vengurla. This sand is exported in large quantities to Bombay.

Survey of Resources : Forests.

10. The Gazetteer reports that in former times the forests in the district were thick and contained valuable teak. About the year 1829 these forests were reported to have been placed at the disposal of the public, and the result has been that at present Ratnagiri forests are almost destroyed. The total area under forests is 12,436 acres. Active measures are now being taken to preserve the forests. The village groves along the coast are well supplied with mango, jack trees, etc.

Survey of Resources: Power.

11. There is no electricity supplying company in the district.

Survey of Resources: Capital.

12. In 1937-38 there were 48 agricultural co-operative societies in the district with a total working capital of Rs. 1·44 lakhs. The non-agricultural societies numbered 24 and their working capital amounted to Rs. 7·94 lakhs. In addition, there were 128 postal savings banks with 15,910 accounts current at the end of 1937-38, the balance to their credit being Rs. 38·8 lakhs. Cash certificates amounting to Rs. 8·9 lakhs were sold during the same year.

Industries in the District—General.

13. The population engaged in industrial occupations had been estimated at 45,903 including the 23,448 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed as makers of manufactured commodities:—

Sawyers	228
Butchers	36
Tailors, milliners, etc.	678
Washing and cleaning	339
Barbers, hair-dressers, etc.	1,667
Scavengers	65
Total ..	3,013

The remaining 42,890 may be regarded as persons engaged in industry. The Census tables give the following classified statistics:—

Forest industries	193
Stock-raising	8,713
Fishing	14,542
Cotton ginning, cleaning, etc. ..	848
Cotton spinning, sizing and weaving ..	2,681
Rope, twine and other fibres	354
Wool carding, spinning and weaving ..	105
Working in leather	205
Carpenters, turners, joiners, etc. ..	5,446
Basket makers, etc.	448
Blacksmiths, etc.	486
Workers in brass, copper and bell-metal ..	187
Potters and makers of earthenware ..	1,292
Manufacture and refining of vegetable oils.	843
Rice pounders and huskers	147
Boot, shoe, sandal, etc., makers ..	1,571
Lime burners, cement makers, etc. ..	911
Printers, engravers, etc.	117
Makers of jewellery and ornaments ..	2,197
Other miscellaneous industries ..	1,604
Total ..	42,890

Of these, only 42 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	No. of factories.		No. of workers.	
	1931.	1938.	1931.	1938.
Engineering	2	1	42	15
Food, drink and tobacco	..	3	..	1,348
Chemicals, dyes, etc.	..	1	..	8
Paper and printing	..	1	..	14
Total ..	2	6	42	1,385

14. The investigator, Mr. B. M. Kale, spent about a fort-night in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Fishing.

15. The district has a sea coast of nearly 170 miles in length extending from Bankot in the north to Redi in the south and more than 14,000 persons earn their living from this industry. The fishermen are reported to be efficient, though illiterate and conservative in their habits. Economically also these people are reported to be better off than the average *Kunbi* or agricultural labourer of the district.

16. The investigator interviewed 9 fishermen and visited the fishing centres at Ratnagiri, Boria in Chiplun taluka, Ketali in Rajapur taluka, Vengurla and Malvan. The methods employed in the catching of fish are of three kinds. Firstly there is rod fishing, stated to be useful in the capture of *ghol* (Jew fish) which are available only in the month of September. The second method is *rampan* (drag net) fishing. This is said to be the most efficient method which brings in large catches of fish. The third method of catching fish is by the use of drift nets, or what may be termed deep-sea fishing. The investigator reports that the boats and nets used for deep sea fishing are inefficient and moreover as the boats have no arrangements in them for storing or salting fish,

the fishermen cannot go far out to sea. The nets and boats used by the fishermen are not of uniform size or value. Some of the nets are of cheaper variety which require to be replaced annually. The cost of a boat is usually about Rs. 75 to Rs. 150 each, but in the case of stronger and more durable boats, the cost is Rs. 400 to Rs. 500 each. Similarly, the cost price of fishing nets varies according to size and quality. The highest price recorded by the investigator was Rs. 46 for a net, in the case of a large and strong one and the lowest was Rs. 5 for one of a cheap variety. The nets are prepared during the slack season. In addition to boats and nets, long ropes are required for catching fish by the *rampan* method. In one instance, the cost of purchasing the ropes of the required length was stated to be as much as Rs. 50.

17. The brisk fishing season extends from September to May. The catch usually consists of *iswan, saranga* (Pomfret white), *bangada* (Mackerel), *pedya* (*Clupea fimbriata*), *ghol* (Jew fish), etc. Usually the bigger varieties of fish, viz., the *iswan, saranga* etc., are caught by fishermen employing the drift net method. About 6 to 8 fishermen go far out into the open sea at times about 20 miles away from the coast. They commence fishing at 8 p.m. and return to the shore not earlier than 11 a.m. the following day. The small varieties of fish which hug the shore are caught by the *rampan* method. One of the fishermen stated that it takes them nearly 3 hours to draw in the *rampan* and about 10 hours to complete the entire operation.

18. The price of fish varies according to its quality and size. *Bangda* (Mackerel) fetches about 2 to 4 annas per 100, smaller fish about Rs. 8 to Rs. 15 per *khandi* and the bigger fish of the *iswan, saranga* (Pomfret white) type are sold for prices varying from 2 annas to 12 annas each. The fish is sold in local markets, and also is exported to the neighbouring district of Belgaum, Kolhapur and even to Bombay. Fish is sent to Bombay in motor-launches, equipped with diesel engines. These have been purchased by some two or three persons with loans given to them by the Department of Industries. Exports to the neighbouring districts are stated to be handled by some private individuals. It is reported that the introduction of motor-launches has helped the fishermen to obtain higher prices for their catch but that it has hit the local consumers of fish. The export trade has created a demand for cold storage and an ice factory has been started at Malvan to meet this demand. Fish is also exported in the salted condition. There are 18 fish curing yards in the district where Government makes available duty-free salt to fishermen for purposes of curing fish. Even with this concession, it is stated that the fishermen are finding the price of salt prohibitive.

19. The fishermen co-operate with one another, and divide their catch on an equal basis. In the opinion of some of the leading fishermen their industry lacks organisation. It is reported that some of them are thinking of transporting their catch to the neighbouring markets in motor lorries and obtain a wider market for the fish. Most of the fishermen are reported to be illiterate, and the children of the fishermen at

Vengurla only are taking primary education. Among the suggestions of the fishermen at the different places may be mentioned that of the Ratnagiri fishermen for the establishment of a fish curing yard at Mirkarwada where about 200 families of the fishermen are stated to be residing. At present they do not get the required quantity of salt and have to pay higher prices. They also want a school in their locality for the education of their children.

The fishermen also want to develop their inland markets and thus minimise their dependence on middlemen. They are of opinion that an improvement in the nets and boats used by them for deep-sea fishing will greatly increase their earning capacity.

Salt Manufacturing.

20. Shiroda is an important salt manufacturing centre. It is reported that about 60,000 maunds of salt are produced every year and that the industry gives employment to nearly 600 workers during the working season lasting from November to May.

21. The investigator interviewed some of the salt manufacturers. All of them pay rents to the owners varying from Rs. 225 to Rs. 1,000 a year. The preparatory processes connected with the manufacture of salt take about 3 months. Salt is prepared during the months of December to May. During the monsoon period, most of the salt makers take to agriculture. It is reported that there is no local demand for the salt manufactured here and most of it is exported to Belgaum. The salt prepared at Shiroda is stated to be blackish in colour. There is keen competition between the different salt makers but since last year an association has been formed and the selling prices have been fixed. The labourers are paid wages at rates varying from Rs. 12 to Rs. 15 per month. The salt makers complain about the competition of Goa salt. It is stated that their salt was being exported to Karwar and Honavar some years back, but now these markets have been captured by the Goa and Uran salt. They urge that they should be given some protection against the competition of Goa salt.

Handloom Weaving.

22. The total number of handloom weavers in the district is estimated at about 600. The important handloom weaving centres in the district are Dabhol, Jambhari, Kankavli, etc. The cloth woven at these centres is reported to be of an inferior quality consisting of *sarees* and bath towels (*panchas*). The yarn used is of 32s and 40s for *sarees* and 16s and 20s for *panchas*. Mercerised Japanese silk of 84s is used for *saree* borders. The yarn is purchased from local merchants and sometimes obtained from Belgaum. Most of the weavers are independent artisans who work on their looms with the help of their family members. The usual price obtained for *sarees* and *panchas* is stated to be Rs. 1-6-0 to Rs. 1-12-0 per *saree* and 3½ annas to 5 annas

for a *pancha*. The products are sold locally. It is stated that about five years back these products used to be sold in the Savantwadi State and also in the neighbouring districts. Now the industry is reported to be in a very depressed condition. Since 1920 the earnings of the weavers are reported to have fallen a great deal. Most of the weavers are said to have given up weaving and joined the mills at Bombay or taken to agriculture or preferred to work as labourers.

Cashew-nut Industry.

23. This is an important industry of the district, and is carried on, on a large scale at Malvan and Vengurla. The local supply of cashew nuts is, however, reported to be insufficient for the two decorticating *karkhanas* in the district and large supplies are imported from Africa. It is reported that the processes of removing shells from the nuts are carried out by hand and that only packing is done with the aid of machines.

24. The factory at Malvan employs about 800 women workers and a supervisory staff of 10 persons. The women are paid on a piece-work basis and earn 4 to 5 annas a day. The salaries paid to the supervisory staff vary from Rs. 25 to Rs. 70 per mensem. About Rs. 4½ lakhs worth of cashew-nuts are reported to be purchased each year, out of which nearly ⅔rds are imported from Africa. Deal wood packing boxes, tins, etc. worth about Rs. 25,000 are also purchased every year. The price of African cashew-nuts is stated to vary from Rs. 60 to Rs. 100 per ton, while that of the local produce from Rs. 40 to Rs. 50 per ton. The decorticated nuts are sold for 5 annas to 10 annas per lb. according to quality. All the production is undertaken for an American firm, and is exported to New York. The annual outturn is estimated to be worth nearly Rs. 7 lakhs.

25. The factory at Vengurla employs 600 labourers, mostly women and a supervisory staff of 12 persons. As at Malvan, the labourers are paid on piece-work basis and earn 3 to 5 annas a day. The staff get salaries varying from Rs. 20 to Rs. 40 per mensem. Cashew-nuts worth about Rs. 2½ lakhs are reported to be decorticated in this *karkhana*, about ⅔rds of the supply being obtained from Africa. The tins and wooden boxes required for packing are obtained from outside. The production is for orders received from other parts of the Province and from New York. The total annual outturn is estimated to be valued at Rs. 3½ lakhs. In addition to the work of decorticating cashew-nuts, oil from the shells of the nuts is also being extracted. The total quantity of oil so extracted is reported to be about 1,000 tins a year, each tin containing 4 gallons of oil. All the oil is utilised locally and at Belgaum and the average price per gallon is stated to be 6 annas.

26. The main complaint of both the *karkhandars* is regarding the high freight charges. The other complaint is about the competition from Quilon, Mangalore, Cochin and Travancore. The investigator

reports that since 1926, the American Company has established a firm financial control over the whole of the cashew-nut industry in the district by advancing large amounts of money to the people engaged in the trade. It is stated that the firm virtually controls the prices of the finished products. Recently the firm is reported to have started experiments in decorticating and extracting oil from shells and to have established a factory at Malwan at a cost of Rs. 2 lakhs. It is stated that if the experiments conducted by the firm are successful, the *karkhana* at Malvan will have to be closed down or will be controlled entirely by the American firm. A suggestion has been made that possibilities of exploring new markets, particularly London, should be investigated.

Cashew-shell Oil.

27. It is reported that there are about 20 families engaged in this industry at Vengurla. They are all stated to be agriculturists who carry on this business as a secondary occupation. The oil is extracted from the shells or outer covers of the cashew nuts which are plentiful in the Ratnagiri district. This oil is useful for painting boats and ships and is also used as lubricating oil. One of the agriculturists engaged in this industry was interviewed by the investigator. He purchases about 60 bags of shells each month during the season lasting from November to May. The price for 60 bags is stated to be Rs. 12. Pots and other simple instruments used in the pressing of oil, are stated to have cost only Rs. 1–4–0 and this is said to be a recurring cost for every month of the season. During the season, the artisan prepares about 70 to 75 tins of 4 gallons each. Each tin is reported to fetch Rs. 2 on an average and the season's production is thus valued at Rs. 140 to Rs. 150. The oil is sold locally and sometimes sent out to Belgaum. These agriculturists are reported to be in need of capital for purchasing the raw materials. There appears to be a good scope for developing this industry by organised and scientific methods, and as stated in the previous paragraph an American firm at Malvan is said to be busy experimenting in this direction.

Rice and Oil Mills.

28. The investigator reports that the rice mills in the district are of recent origin. They have all been started within the last ten years. It is stated that there are two mills in the town of Ratnagiri and four more in other parts of the district. Some of the mills also press oil and grind flour. Of the three rice mill owners interviewed by the investigator, two press oil from sesame seed, groundnuts and *copra*, obtained from Kolhapur. All the three mills are worked on oil engines. The labourers work for about 8 hours a day and are paid wages varying from Rs. 14 to Rs. 50. Paddy husking is usually done to order. Rice is prepared from paddy at the rate of Rs. 3½ per *khandi*. There is reported to be keen competition among the local mill owners, and the owners who were interviewed, were not hopeful about the future of their industry. Their main handicap is reported to be lack of sufficient capital.

Button Manufacture.

29. Aluminium buttons are manufactured by two concerns with the aid of machinery at Vijaydurg. In addition to these, there are some small *karkhandars* who manufacture similar buttons without the aid of machinery. The factory owners are reported to have made great profits during the last War but since then are suffering from the effects of competition among themselves.

30. The materials utilised in the industry are aluminium sheets and castings. These are obtained from Bombay. Of the two concerns visited by the investigator, one employs four workers who work for 8 hours a day and are paid wages varying from Rs. 13 to Rs. 15 per month. In addition to buttons, bangles and other ornaments are also prepared from aluminium. The earnings of the owner of this concern are estimated to be about Rs. 30 per month during the brisk season. The other concern is run with the aid of an oil engine and has about 20 machines. There are 19 persons working in this factory of whom 6 are family members and the remaining 13 are employees. The factory works for 9 hours a day and the employees are paid wages varying from Rs. 10 to Rs. 20 per mensem. The buttons are sold locally and in the district and are also exported outside, mostly to Bombay where some of these concerns have their selling agents. There is reported to be fierce competition between the different manufacturers. Their main requirement is stated to be capital for the purchase of raw materials. It seems that at present they have to pay a very high rate of interest for obtaining their capital on loan. Regarding the future of their industry, the factory owners are very pessimistic. They, however, think that if the industry is organised and the existing internal competition eliminated, there are chances of improving the industry. In fact, conditions are reported to have improved since a joint agreement in respect of selling prices was effected last year.

31. Besides these manufacturers of aluminium buttons, there is reported to be one family which prepares buttons, flower-pots, etc., from horns. This family gets its raw materials from Karwar, Mangalore and Bombay. The cost of a horn is stated to vary from Re. 1 to Rs. 3. The buttons are made by hand and articles worth about Rs. 250 are prepared during a year. These articles are sold in the markets of the Ratnagiri district and also in Bombay. The future prospects of this industry are said to be not very bright, as there is no demand for the articles mainly because of the competition from cheap substitutes.

Iron Furniture.

32. The investigator visited a factory at Malvan, which manufactures cots, cradles, chairs, benches, tables, etc. Four people work in the factory during the brisk season and two in the slack months of June to September. Of the raw materials, iron is purchased from Bombay and hardware and crude oil are purchased locally. There

are 8 machines in the factory working on oil engine and the total cost on equipment is reported to be about Rs. 5,000. The labourers work for 9 hours a day and wages vary from Rs. 6 to Rs. 20 per mensem, according to skill. The owner's main complaint is one of inadequate demand in the local markets, while there is said to be severe competition in other markets like Kolhapur, Belgaum and Sawantwadi.

Cutlery Manufacture.

33. Penknives, locks and nut-crackers are prepared in some places in the district by some of the blacksmiths. Malvan is specially noted for this industry. At this place writing pens were also being prepared some years back but this has been discontinued in recent years. The investigator interviewed two artisans engaged in the cutlery industry, one at Girye in Devgad taluka and the other at Malvan. The artisan at Girye is mainly engaged in carpentry. The manufacture of cutlery is only a subsidiary occupation to him. The raw materials required in the cutlery industry are iron, brass and steel and all these are purchased by him from the local merchants.

The articles prepared are penknives, nut-crackers, foot-scales, *agarbatti*-stands, surveyors' compasses, etc. The average annual sale of these articles is worth about Rs. 400. The articles are either made to order or are sold in the local markets, and sometimes outside. The artisan has two brothers who assist him in his work. Their total income from the cutlery industry and also from carpentry does not exceed Rs. 25 per mensem for each.

The artisan interviewed at Malvan manufactures penknives to order. He gets his supply of raw materials like brass, iron, horns, etc., from the merchants at Bombay. The artisan is well-known in Malvan for his skill and his penknives are sold at a high price. It is stated that he used to export his penknives for sale to Bombay through an agent but due to the competition from cheap foreign articles, there is now no demand for his penknives, and therefore he produces only for order. According to his own estimates, he sells penknives worth Rs. 100 a year and repair work fetches him an additional income of Rs. 240 a year.

34. Neither of the artisans is hopeful about the industry and they point out that all the markets have been captured by foreign competitors. Their main grievance appears to be want of sufficient capital even to purchase their raw materials. It has been suggested that in view of the very good quality of penknives produced in the district, Government should support the industry by purchasing penknives for their several offices from these artisans.

Printing Presses.

35. It is stated that there are many printing presses in the district and that most of them are small. The general complaint appears to be that there is not enough work for the presses to keep them fully

employed. The investigator interviewed the press owners at Ratnagiri, Vengurla and Malwan. In the case of most of the presses the printing work is done only to order, and books, invitation cards, etc., are taken up for printing. The employees work generally for 8 hours a day and are paid wages varying from Rs. 10 to Rs. 30 per month according to the nature of work done by them. The amount of printing done during a year differs from press to press. In two cases where the presses are worked on oil engines, the printing done is worth Rs. 12,000 a year while in the other two where printing is done with hand machines, it is worth only about Rs. 1,200 to Rs. 2,000 a year. The main grievance of the press-owners is that there are not enough skilled composers and they cannot therefore engage the composers only on piece-work basis but have to engage them throughout the year. This it is stated, adds to the cost of maintenance of their presses. Due to want of adequate demand for printing work, the owners are not hopeful about the future of their industry.

Ice Factory and Cold Storage.

36. There is one ice-factory at Malvan where arrangements for cold storage of fish, etc. are also available. The factory is owned by a person from Bombay who is stated to have invested a capital of Rs. 35,000 in this concern. The factory is worked on an oil engine and has seven machines. The cost of the equipment is reported to be Rs. 28,000. Materials required for the factory like crude oil, ammonia and calcium are imported from Bombay. The ice manufactured is usually sold at Rs. 1-4-0 per 100 lbs. Demand is brisk during the months of April and May, and the factory is usually closed during the rainy season. There are in all five persons working in the factory. One is entrusted with the managerial duties and is paid Rs. 50 per month. The other four are workmen who work for 10 hours a day and are paid Rs. 15 each per mensem.

Brass and Copperware.

37. In Ratnagiri there are some artisans who are engaged in preparing brass and copper pots from imported sheets. The industry is stated to be in a bad way owing to the competition of cheap machine-made articles. The artisan interviewed by the investigator, however, is reported to be getting a net income of Rs. 40 a month. This artisan is assisted by another worker who is paid Rs. 25 a month.

Ship-building.

38. It is stated that the ship-building industry was in a flourishing condition at Ratnagiri about 10 years back. It is now in a depressed condition. Now, there is only one prominent ship-builder who builds boats for the Bombay Steam Navigation Company. The timber required is purchased by him at the Government depot at Karwar. About 600 *khandis* of timber are said to be purchased

annually and most of the stock is purchased in the month of November. It is pointed out that at present timber is auctioned off to the highest bidder and consequently it is not possible to have an assured supply at a reasonable price. It has been suggested that Government should sell these ship-builders, timber at reasonable rates.

The work of building boats is brisk during the period from September to May. There are about 150 workers employed in the industry and they are paid about 8 annas a day.

There is not much of local competition but builders from Bulsar and Bassein are reported to be competing in the trade. The ship-building industry on the Konkan side has declined in recent years and the builders are not hopeful regarding the future. As an instance, it is stated that no big vessels have been built during the last ten years whereas in previous times at least one big vessel costing about Rs. 15,000 used to be built in a year. The reason for the decay of this industry is attributed to the rapid development of motor-bus traffic and the railway and steamer services.

Soft wood Articles.

39. At Shiroda, the investigator interviewed a family engaged in making flowers, garlands, etc., from a soft wood called *bhend*. The raw materials utilised are the *bhend* wood, paper, colours, and iron wire. All these materials are purchased at Belgaum, the *bhend* wood being stocked in the month of January. The articles are all made by hand and they are reported to show good workmanship. Demand is brisk during the marriage season. The selling price of the different articles varies from 4 annas to Rs. 2-8-0 and the average annual sales are stated to be worth about Rs. 100. The articles are mostly produced for order, and sold locally and also in other parts of the district. It is stated that there is a good scope for the industry if the products are sold in outside markets, particularly in Bombay.

Clay work.

40. At Vijaydurg, the investigator interviewed a worker in clay who prepares flower-beds, beds for *tulsi* plants, images of Ganapati, etc. The raw materials utilised by him are iron and clay. His instruments are simple and are reported to have cost him only Rs. 30. The images of Ganpati are sold during the month of August for prices varying from Re. 1 to Rs. 10 each, according to size. The beds for *tulsi* plant are sold during the months of October and November for Rs. 3 to Rs. 5 each. The value of his output per year is estimated to be about Rs. 400. About one-third of his production is for orders received. The market for his products is usually local but sometimes they are also sold in outside markets. During slack days, he works on daily wages and in the rainy season, he is engaged in agriculture. His earnings from clay work are reported to be about Rs. 25 per month.

But the work is not continuous. The artisan considers that there is scope for the development of the industry if sufficient capital is made available to the workers engaged in it.

Cap-making.

41. At Ratnagiri, the investigator interviewed one of the artisans engaged in making caps. He employs 4 persons to assist him and they are paid Rs. 15 a month for working 9 hours a day throughout the year. The materials utilised in the making of caps are cloth, leather straps, jute cloth and card board packing boxes. Different varieties of caps are prepared and selling prices vary from 5 annas to Rs. 2–8–0 each, according to quality. The average monthly outturn is estimated to be worth about Rs. 350 to Rs. 400. The cap maker is reported to be earning about Rs. 30 per month. It is said, however, that business is slack in the monsoon season.

Bidi making.

42. This is one of the common industries found in almost all towns and large villages. The investigator interviewed two *bidi*-makers, one at Ratnagiri and the other at Malwan. The Ratnagiri *bidi*-maker imports tobacco from Nipani while the *bidi* leaves are collected by himself and his family. The *bidis* are sold at the rate of 1,000 for Rs. 2 or about 8 *bidis* per pice, and the average sales per month are stated to be about Rs. 350. About 8 to 10 persons are employed for preparing the *bidis* and are paid at the rate of 10 annas per 1,000 *bidis*. The investigator reports that this *bidi*-maker owns two shops which are managed by himself and his son, and that together they earn about Rs. 50 per mensem.

43. At Malwan, the *bidi* maker gets his supply of tobacco from the local merchants. The *bidi* leaves are purchased green in their season and dried, packed and stored for the year. The *bidis* are sold for Rs. 1–8–0 to Rs. 1–14–0 per 1,000. There are about 8 to 9 workers who prepare *bidis* and are paid at the rate of 12 annas per 1,000 *bidis*. The competition between the local *bidi*-makers is reported to be very keen. The total number of *bidi* shops at Malwan is reported to be about 35, giving employment to about 200 persons.

Brooms and *Patravalis* (Leaf-plates).

44. Both these are cottage industries and are carried on in their homes by most of the villagers. The brooms are prepared out of the leaves of the cocoanut tree while *patravalis* are prepared out of leaves of wild trees. The raw materials are thus obtained free of cost and the industry is stated to be carried on extensively in the taluka of Malwan and Vengurla. There are reported to be about 4 or 5 merchants at Vengurla whose main business is the purchase and export to Bombay of the brooms and *patravalis* brought for sale in local markets by the

villagers. The investigator interviewed two of these exporters at Vengurla. In one case where the merchant specialises in exporting only brooms, the annual exports are estimated to be worth about Rs. 1,300. The other merchant exports more of *patravalis* than brooms and his annual exports are valued at Rs. 800 in the case of brooms and Rs. 3,950 in the case of *patravalis*. The brooms are purchased for prices varying from Rs. 3 to Rs.'8 per 100 and the *patravalis*, for 9 annas per 1,000. The export season lasts from September to May. It is estimated that the earnings of the villagers engaged in this trade are about 1½ annas a day.

Shoe-making.

45. At Malwan, the investigator interviewed a shoe-maker engaged in preparing *champals*. This artisan gets his supply of leather by going round the villages and collecting the leather from the tanners. The prices obtained by him for his *champals* are usually 8 to 10 annas. From one tanned hide worth Rs. 5 it is reported that *champals* worth about Rs. 8 can be made. The monthly output is valued at about Rs. 30. He and another member of the family work on partnership basis and divide the earnings equally. The work is said to be irregular. It is stated that for about 10 days in a month, both of them have to remain idle. The main complaint, however, is regarding the fall in the prices of *champals*, and the consequent fall in their earnings.

Pottery.

46. The investigator visited Kelmath in the Deogad taluka where there are stated to be about 40 families of potters. The economic condition of these potters is reported to be very bad. The potters obtain their supply of earth from some of the landowners and give them in return a stipulated quantity of earthen pots. The processes involved in the preparation of pots are reported to be very laborious. The implements used are of a cheap kind and in most cases do not cost more than Rs. 5. The pots prepared are of various sizes and are sold at prices varying from ¼ anna to 4 annas each. The industry is seasonal and is carried on only during the months of December to May. Most of the potters take to agriculture in the remaining months. In some cases, agriculture is the main occupation and the preparation of pots is undertaken as a secondary occupation. All the earthen pots are sold in the local markets at Kankavli. The potters lack capital and are very pessimistic about the future of their industry.

Coir-rope Making.

47. Shiroda, Vengurla and Malvan are stated to be some of the important centres of coir-rope making in the district. The ropes are prepared from the coir of the cocoanuts which grow abundantly on the coastal lands. The preparation of coir-rope is carried on as a cottage industry and in some cases this is a secondary occupation.

At Shiroda, there are reported to be about 20 families engaged in this industry. At Tirode, Aravli and Vengurla there are reported to be 40, 60 and 30 families of rope makers respectively. The process of preparing ropes takes a long time. The husks of the cocoanuts are first buried in the ground and kept there to rot for some time. Then the coir is separated from the husks and ropes, thick thread, etc., are prepared. The cocoanut husks are obtained from the owners of cocoanut gardens and sometimes these gardens are taken on lease. As most of the persons engaged in this industry are agriculturists the ropes are prepared during the off season. The length of a rope is usually 12 to 16 feet and 10 to 12 such ropes are sold for a rupee. Coir thread is sold for ½ anna per yard and the coir itself for about Rs. 2½ to Rs. 3 per maund. At Vengurla, there are some employers who purchase coir locally and get ropes prepared by employing some workers on contract basis and export the same to Bombay. The poorer people, however, sell their ropes either locally or take them to Goa. It was reported that at Goa these artisans have to pay a high duty. There is much internal competition among the local workers themselves. At Vengurla which is an important steamer port, the rope making industry is reported to have prospered till recently but with the introduction of iron straps which are now being used for binding packages and parcels, the demand for ropes has fallen considerably. The workers are not much hopeful about their industry, as the labour involved is stated to be considerable and the return very low. They are however of opinion that their industry can be developed with the help of machinery.

Other Industries.

48. Among the other industries, the persons engaged in which were interviewed by the investigator may be mentioned the manufacture of Ayurvedic medicines, export of sand to Bombay for the preparation of sylicate for soap and the preparation of *kokam* peels. The last named industry is practised by practically every villager, the surplus being sold to merchants who export them to Bombay. During the mango season, there is a large export trade. The total exports to Bombay alone are estimated to be worth about Rs. 10 to Rs. 12 lakhs every year. This export trade is said to give employment to about 5,000 people during the season.

Possibilities of New Industries.

49. Among the possibilities for new industries may be mentioned fruit canning and preserving. The district has a large mango crop and as steamer communications with Bombay are stopped during the monsoon, a good part of the mango crop goes to waste. It is stated that a person at Kelshi in Dapoli taluka has recently started this industry on a small scale; there seems to be good scope for the extension of such establishments.

Another industry which deserves attention is fishing. This industry should be developed by means of mechanical power propelled boats. An ancillary industry is the extraction of shark fish oil to take the place of imported cod liver oil.

Among other possible new industries may be mentioned the extraction of oil from cashew-nut shells and the establishment of a coir industry for utilising the fibre of the vast quantity of cocoanuts which are to be found in the district. It has been suggested that there is some scope for starting small-scale tanning and bone meal industries in the district. Further, it is stated that sand of a kind from which glass could be prepared is available in Sawantwadi, very near to Vengurla, and that the possibilities of starting a glass-making industry in the district, should be investigated.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries of the different Districts of the Bombay Province

SATARA

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and, in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries.

of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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SATARA.

Position and Area.

The district of Satara lies between 16° 48′ and 18° 11′ north latitude and 73° 36′ and 74° 58′ east longitude and covers an area of 5,053 square miles. It is bounded on the north by the States of Bhor and Phaltan and the Nira river, which separates it from Poona ; on the east by the Sholapur district and the States of Aundh and Jath ; on the south by the river Varna, separating it from the States of Kolhapur and Sangli and by a few villages of the Belgaum district ; and on the west, along the Western Ghats, by the districts of Kolaba and Ratnagiri.

Physical Features.

2. From Mahableshwar in the north-west corner of the district 4,717 feet above the sea, start two hill ranges of equal height and nearly at right angles to each other : one the main range of Sahyadris or the Western Ghats and the other the Mahadeo range of hills. These hills throw out numerous spurs over the district, forming the valleys of several streams which make up the head waters of the Krishna, one of the largest rivers in Southern India. Except near Mahableshwar and in the valleys of the Koyna, the hills are very low, bare and rugged. There are, in the district, two river systems the Bhima system in a small part in the north-east, and the Krishna system throughout the rest of the district. The district is well provided with water from these two big systems. The district may be divided into three belts, a moist hilly western and a dry eastern country separated by a transition tract. The hilly west is called the Dongri and the east, the Desh. The transition tract is flatter and contains more rich level soil.

Climate and Rainfall.

3. The climate is not uniform all over the district. In the east, the heat is considerable especially in the months of April and May. But near the Ghats it is much more moderate, being tempered by the sea-breeze. During the south-west monsoon the fresh westerly breeze makes the climate agreeable. The monsoon sets in about the middle of June, though it is earlier in the furthest west. The wettest month is July. At the end of September, the north-east monsoon sends down heavy rains. The rainfall is heavier in the Dongri tract where it varies from thirty to two hundred and fifty inches. The Desh receives about twenty to twenty-five inches of rain while the transition tract gets about thirty inches.

Population.

4. The district has a total population of 1,179,712 persons of whom 1,067,405 live in rural areas consisting of 1,330 villages while the

remaining 112,307 are to be found in 11 towns. The important towns are :—

	Population.
Satara	26,379
Karad	14,479
Wai	11,760
Ashta	11,251
Tasgaon	11,011
Islampur	10,737

The proportion of the urban population to the total population is about 9·5 per cent.

According to the Census returns of 1931, the total number of principal earners in the district is 362,751 of whom 278,662 are males. The occupational distribution of this number is as follows :—

Exploitation of animals, vegetation and minerals.	293,962
Industry	32,672
Transport	2,564
Trade	9,040
Public force and administration	6,504
Professions and liberal arts	4,169
Living on their income	437
Domestic service	2,282
Insufficiently described	6,297
Unproductive	4,824
Total ..	362,751

The proportion of the industrially occupied persons to the total earners is about 9 per cent. But in addition to the 32,672 persons shown as engaged in industrial occupations according to Census classifications, there are 826 persons engaged in forestry, 7,553 persons engaged in stock-raising and 429 persons engaged in fishing. Though for purposes of Census classification these persons have been included under "exploitation of animals and vegetation" they are engaged in more or less industrial occupations and can be included among industrial workers for purposes of this survey. With the addition of these, the number of principal workers in the district who are engaged in different industrial occupations, comes to 41,480.

Health and Medical Facilities.

5. Some indication of the health conditions of the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 40·56 and the mean ratio of deaths for

the same period was 25·58 per thousand. The survival rate for the district is thus 14·98 per thousand.

In Satara town, besides the Government hospitals, there are two maternity hospitals and some child welfare centres. Mahableshwar, Wai and Miraj have each got a hospital. In addition, there are two institutions at Miraj, one for the lepers and the other for tubercular patients. At Panchgani and Wai there are also sanatoria for treatment of tuberculosis. Only the hospital at Mahableshwar is maintained by Government, and the rest are maintained by missions and private persons. There are seventeen dispensaries in the district of which seven are maintained by the District Local Board, seven by municipalities, and three by missions. The total number of doctors in the district is reported to be 90 of which 24 are in Satara town. The proportion of doctors to the total population in the district excluding Satara town, comes to one for 17,500 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 77,432 persons are returned as literates thus constituting a literacy percentage of nearly 6·5 for the district.

The educational facilities available in the district are summed up in the following statement for 1937–38:—

	Number of Institutions.	Number of Pupils.
Primary schools	1,063	87,064
Secondary (including lower secondary and English teaching) schools ..	23	3,674
Commercial, agricultural and industrial schools	2	81

Of the 1,330 villages in the district, only 796 villages had schools in them.

Transport Facilities.

7. The Madras and Southern Maratha Railway passes through the middle of the district from north to south. The trunk road from Poona to Bangalore runs parallel to the railway, and another road runs from north to south in the east of the district. Two roads, one from Wathar station through Wai and the other from Satara, join at Wai. The total length of roads maintained both by the Public Works Department and the local authorities is 778 miles of metalled and 1,363 miles of unmetalled roads.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 3,134,335 acres of which 2,271,923 acres constitute the gross cropped area. Current fallows constitute 197,204 acres. Forests absorb 441,878 acres while uncultivable waste or land that is not available for cultivation is 329,122 acres. There are 24,732 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area in 1937-38 :—

	Area in acres. 1937-38.
Rice	60,446
Wheat	57,302
Barley	2,315
Jowari	582,047
Bajri	354,181
Ragi	38,171
Maize	9,572
Gram	79,197
Other food grains including pulses	216,989
Linseed	2,226
Groundnut	218,988
Other oil-seeds	36,459
Condiments and spices	31,130
Sugarcane	8,720
Cotton	11,739
Other fibres	5,280
Tobacco	14,825
Fodder	525,539
Fruits and vegetables	14,626
Other miscellaneous crops	2,171
Total ..	2,271,923

The important commercial crop of the district is groundnuts while the main food crops are *jowari* and *bajri*.

Fruits and vegetables accounted for an area of 14,626 acres in 1937-38. More detailed information regarding these important crops was obtained

from the Department of Agriculture which supplied the following details in respect of 1938–39 :—

	Acres. 1938–39.
Vegetables—	
Potatoes	2,627
Sweet potatoes	2,260
Carrot	1,813
Onions	2,172
	8,872
Green vegetables—	
Fenu-greek	120
Edible hibiscus	60
Others	2,563
	2,743
Fruits—	
Plantain	1,203
Mango	118
Lime	136
Sweet lime	346
Pomegranate	332
Guava	758
Others	53
	2,946
Total, Fruits and vegetables ..	14,561

The district has more than 525,500 acres under fodder. Jungle grass is also available in considerable quantities in the western part of the district and considerable number of ordinary cattle are bred there. Besides these ordinary breeds, the district produces two fine breeds, the Mhasvad *khillaris* bred mainly in the Man taluka and the Krishna Valley cattle bred along the banks of the Krishna river and its tributaries in the south of the district. These are bred by the ordinary cultivators

and are mainly stall-fed. The details of live-stock in the district according to the Census of cattle for 1934–35 are :—

Bulls and Bullocks (breeding, working and young stock)	..	..	38,263
Cows	(do.)	..	202,594
Buffaloes	(do.)	..	40,217
Cow-buffaloes	(do.)	..	173,491
Sheep and goats	..	..	426,548
Horses and ponies	..	..	6,478
Donkeys	..	..	2,849

Of these, milch cattle number 246,701 consisting of 134,137 cows and 112,564 cow-buffaloes.

Survey of Resources : Minerals.

9. The Gazetteer states that iron is found in abundance on the Mahableshwar and Mahadeo hills. It was formerly worked by a class of artisans called *Dhavdas*. Manganese is also found in laterite in the neighbourhood of Mahableshwar. Building stone, road metal, and lime stone are also found in this district. Clay suitable for bricks and tiles is found in all river banks and Wai, Bavdhan, Mahuli and Karad were known for their bricks and tiles.

Survey of Resources : Forests.

10. The district has got 441,878 acres under forests which are found scattered all over the district. The main produce is timber and firewood. Teak, *ain*, *khair*, *sisam*, etc., are the important hardwoods. Among softwoods the important varieties found are *sawar*, *kakad*, *petari*, etc. In addition, minor forest produce like *harda*, *tarwad* and *chilhar* bark, *apta*, and *temburni* leaves, honey, etc., are also found. The forests, however, do not seem to be very remunerative.

Survey of Resources : Power.

11. There are five electric supply companies in the district. The Mahableshwar Electric Supply Company has been started recently. The figures of output of the other four companies are given below :—

—	Units generated.	Total Units sold.	Units sold for power purposes.
Satara Electric Supply Company Limited ..	80,489	65,560	20,656
Panchgani Electric Supply Company Limited	70,321	69,006	10,963
Karad Electric Supply Company Limited ..	49,608	39,635	12,576
Wai Electric Supply Company	25,135	19,077	1,884

Survey of Resources : Capital.

12. There were 350 agricultural co-operative societies in the district in 1937–38 and their total working capital amounted to Rs. 25·09 lakhs. The non-agricultural co-operative societies numbered 46 and their working capital during the same year amounted to Rs. 12·84 lakhs. In addition, there were 153 post office savings banks with 31,285 accounts current at the end of 1937–38 with a balance of Rs. 56·8 lakhs. In the same year, cash certificates amounting to Rs. 11·5 lakhs were sold in the district.

Industries in the District : General.

13. The population engaged in industrial occupations has been estimated at 41,480 inclusive of 8,808 persons engaged in forest industries, stock-raising and fishing. Of these, the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	75
Butchers	138
Tailors, milliners, etc.	2,141
Washing and cleaning	1,566
Barbers, hair-dressers, etc.	1,807
Scavenging	231
Total ..	5,958

The remaining 35,522 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	826
Stock-raising	7,553
Fishing, etc.	429
Cotton spinning, sizing and weaving ..	3,988
Rope, twine, etc., making	5,154
Wool, carding, spinning and weaving ..	756
Working in leather	1,534
Carpenters, turners, joiners, etc.	532
Basket makers, etc.	716
Blacksmiths and other workers in iron ..	1,142
Potters	2,603
Manufacture and refining of vegetable oils ..	1,638
Boot, shoe, etc., makers	2,791
Cabinet makers	978
Lime burners, cement workers, etc.	2,428
Jewellers and ornament makers	1,092
Other miscellaneous industries	1,362
Total ..	35,522

Of these, only 74 workers were employed in concerns coming under the Indian Factories Act during the Census year, 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	1	1	23	50
Engineering	1	2	51	272
Food, drink and tobacco ..	....	1	....	7
Chemicals, dyes, etc. ..	....	2	....	85
Paper and printing ..	....	1	....	9
Processes re : wood, stone and glass	....	1	....	15
Seasonal factories ..	....	1	....	25
Total ..	2	9	74	463

14. The investigator, Mr. N. M. Joshi, spent 20 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Brass and Copperware.

15. The investigator interviewed seven persons who were engaged in the brassware and copperware industry in Satara town. It is reported that this industry has been in existence in this town for the last 75 years. At present there are reported to be only 25 *karkhanas* and 4 dealers in brass and copperware. The copper and brass sheets are purchased at Bombay ; sometimes they are also purchased locally. In addition to the transport charges, the artisans have to pay an *octroi* duty to the Satara Municipality.

16. Many of those who import or locally purchase metal sheets, have no *karkhanas* of their own. They distribute the sheets among the outworkers who manufacture utensils out of them. The manufactured goods are generally of an antiquated type. The out-workers are remunerated at the rates shown below :—

	Wages per 16 seers.					
	Copperware.			Brassware.		
	Rs.	a.	p.	Rs.	a.	p.
Tapeli	2	4	0	3	4	0
Ghagar	4	0	0	5	4	0
Handa	3	12	0	5	4	0
Parath (*tat*)	1	4	0	1	4	0

Those who work on the basis of daily wages receive 7 annas to 12 annas per day.

The finished brassware and copperware are exported to the neighbouring districts and to the Nizam's Territories, the Central Provinces and Berar. The investigator states that some of the *karkhandars* also import and sell machine-made utensils. The *karkhandars* consider that their industry has no bright future unless considerable improvement takes place in its technique and organisation.

Glass Works.

17. The investigator visited the well-known Ogale Glass Works situated in Aundh State in Satara district. This concern was started in 1914. It manufactures glass-ware of various kinds and also hurricane lanterns of tin and brass, enamelled sign boards, etc. About 400 persons are employed and work in the different sections of the factory. In addition, there are about 125 persons who work as cartmen, basket weavers, etc. The factory is well equipped with up-to-date machinery and it is reported that by constant replacements, its efficiency is maintained intact.

18. The raw materials used for glassware are sand, lime, saltpetre, manganese dioxide, soda and borax, of which the last two are imported. Iron sheets made in India, and brass and tin sheets imported from foreign countries, are used in preparing lanterns. Stainless steel sheets are also imported from foreign countries and articles of household use are manufactured out of the same. For manufacturing enamelware, the company uses Indian black iron sheets and foreign chemicals, the enamel being made by the concern itself.

The concern has a share capital of about Rs. 5 lakhs. Additional requirements are met by loans or deposits on which the company has to pay interest at rates varying from 6 to 9 per cent.

The annual output of glassware, lanterns and other articles is estimated by them at about Rs. 3½ lakhs. The general average of wages paid to the workers comes to Rs. 15 per month. It is stated that the competition from Japan and Germany has resulted in great loss to the Company, as the prices of articles sent out by those countries are lower than their own prices. It is also stated that the protection to the Indian iron and steel industry has resulted in raising the cost of raw materials they are using, and this handicaps them in competing with the growing imports.

20. Another glass works recently started in the district is the Ghalsasi Glass Works. It is situated in the village Shere, near Shenoli railway station in Karad taluka. Among the articles manufactured by this concern are glass bangles, beads, tumblers, chimneys, bottles of various kinds, and all other kinds of blown, pressed and other glass articles. The factory gives work to 40 persons, of whom 20 are skilled workers. The equipment is of an old type and a considerable amount of work is done by hand. The goods are marketed in Satara, Belgaum, Mysore and parts of the Madras Presidency. It is stated that more capital is required by them for installing new and efficient machinery.

Ironware.

21. Satara district is also known for the enterprising concern of Kirloskar Brothers who manufacture among other things, iron furniture of various kinds, agricultural implements, water-lifts, diesel engines, groundnut decorticators, sugar-cane pressers, and parts of textile machinery. About 750 persons are employed by the *karkhana* which is situated in Aundh State. It is estimated that the value of the machinery used by the concern comes to very nearly Rs. 6 lakhs.

22. The necessary raw materials, like pig iron, steel, paints, etc., are imported from Bombay and outside. Demand for their products is brisk during the months of October to March. They have an efficient marketing organisation and have their distributing agents in most of the places. They also employ travelling salesmen. The market for their products is both inland and foreign. Competition from abroad is stated to be mainly felt in water-pumps, bolts and nuts. The workers are paid wages varying from Rs. 11 to Rs. 25 per month. The main complaints regarding the handicaps suffered by the industry are : firstly, the want of efficient machines and secondly the high cost of raw materials. It is pointed out that though the proprietors try to maintain their efficiency by continually replacing old by new machinery, they find themselves very often handicapped by having to obtain the necessary machinery from abroad which makes it difficult for them to get exactly the type of machinery they require. Similarly the protection given to the iron and steel industry in India, is said to have resulted in raising to some extent the price of the raw materials they use, and they suggest that either the raw materials should be made available to them at cheaper rates or that industries which are based on the iron and steel industry, should be also given protection.

Silk Reeling and Dyeing.

23. The silk reeling and dyeing industry is reported to have been in existence in Satara for some time. The investigator interviewed two *karkhandars* engaged in this trade. About 100 persons are following this occupation in Satara town and their annual output is valued at about Rs. 1,25,000. It is reported that the prices of the commodities turned out by these artisans have fallen in recent years, due mainly to the competition of cheap Japanese and Chinese goods.

24. The raw silk used consists of Kashmere, Chinese and Japanese silk. It is stated that Kashmere silk is superior in quality to the other varieties. All these varieties are purchased at Bombay. In one of the *karkhanas* there are about 37 workers while in the other there are 17 workers. The workers are said to be efficient but not punctual. They are paid wages varying from Rs. 7 to Rs. 12 a month. The annual output of one of the *karkhanas* visited by the investigator is estimated to be worth about Rs. 70,000. The finished products are marketed locally as well as in the Deccan districts. The customers are mostly weavers. Owing to competition among the local *karkhandars,* it is reported that the proper price is not obtained, and the *karkhandar* interviewed states that he has been running his concern at a loss for some time. It is suggested that for the improvement of the industry, up-to-date machinery and cheap capital should be made available, and improved methods of reeling should be taught to the local artisans. It is also urged that something should be done to utilise the waste silk.

Handloom Weaving.

25. Handloom weaving does not play the same dominant part in this district which it does in some others. It is, however, found in a number of places, among which may be mentioned, Vita, Islampur, Mayani, Karad and Umbraj. Everywhere the account given to the investigator was one of decline during the last ten to fifteen years.

26. At Vita, the yarn used is of 20s. It is stated that it takes a family 2½ days to weave two *sarees* for which they get 12 annas i.e. about 5 annas a day. If the cloth is of a superior quality, they get one anna more. The *sarees* are sold in the local bazar. In Islampur, it is stated that the weaver gets only about 1½ annas a day. At, Umbraj, there are reported to be 15 handlooms. Yarn is purchased at Karad and no outside labour is employed. A family weaves 4 to 5 *sarees* a week and earns Re. 0-5-0 per *saree.* Thus the weekly income of the family is about Rs. 1-4-0 to Rs. 1-9-0. Mayani was formerly an important centre of *uparani* weaving and it is estimated that about 4,000 *uparanis* were woven annually at this centre. Now the industry has declined and due to change in fashion, *uparanis* are woven here only during marriage season and that too by about 7 or 8 weavers. The rest have taken to *saree* weaving. A family on an average earn about Rs. 1-8-0 a week from weaving *sarees.* The general complaint

is of depression in both demand and prices due to change of taste and competition of the products of mills and powerlooms. The weavers want some kind of protection against this competition.

Kambli Weaving.

27. The investigator visited Mayani which was once an important centre for weaving *kamblis*. It is reported that now there are only four looms working there. The woollen yarn is purchased locally from the *dhangars*. The price of wool is stated to be high, as much of the local wool is exported outside. To weave one *kambli*, wool worth Rs. 2 is required and other miscellaneous expenses come to 4 annas. The average price for which the *kamblis* are sold is Rs. 2–8–0 each. Due to these low selling prices the weaver is reported to get hardly 4 to 5 annas per *kambli* for which he spends nearly 2 days. The *kamblis* are sold in the neighbouring villages.

28. Islampur is another centre of *kambli* weaving where 5 looms are reported to be working regularly. The raw material is purchased from the *dhangars* of neighbouring villages and the *kamblis* are sold to the villagers. An artisan and his wife weaving three *kamblis*, earn about Re. 1 to Rs. 1–8–0 per week. Another artisan having two looms is reported to be weaving 8 *kamblis* per week and earning about Rs. 3. The cost of a *kambli* is said to be Rs. 1–4–0 (Rs. 1–2–0 for wool and 2 annas for other expenses) and the selling price Rs. 1–8–0 to Rs. 1–12–0. The weaver thus earns about 4 to 8 annas per *kambli*. Their methods of work are old but they are willing to be trained in the new methods of weaving. Their complaint is mainly about the very inferior type of wool which is available to them.

29. The Maharashtra Charkha Sangh has since 1937 started a *kambli* weaving centre at Mhaswad. Roundabout Mhaswad there are many families of *dhangars* who are engaged in wool-weaving. At Mhaswad itself, it is stated, there are some 80 to 90 *kambli* weavers and every Wednesday there is a big market wherein all the products from the surrounding areas are sold. The Manager of the *kambli* weaving centre, estimates the annual output of *kamblis* at Mhaswad and its surrounding areas at about 30 to 40 thousand. The wool-weavers are all reported to be very illiterate and poverty-stricken. The wool available at Mhaswad is stated to be of a good quality. The sheep are shorn twice a year. On an average, from one sheep at one shearing about 10 to 20 tolas of wool are reported to be obtained. The wool is sold at the rate of 150 to 180 tolas per rupee. The maximum count of yarn that can be produced from the wool available there, is reported to be 10s. The yarn is usually spun by the women of the *dhangar* community and sold at the rate of one seer per rupee ; but it is said the *dhangar* women generally do not get this rate as the weavers unite among themselves to bring down the price of the woollen yarn. The Manager reports that a woman can spin about 30 to 40 tolas of yarn in a day. As these women have no capital for stocking wool during season, they get work

for only about two or three months during each of the two shearing seasons. The weavers at Mhaswad find the supply of local yarn inadequate and get their supplies from the surrounding towns. Usually two days are required to weave one *kambli* and the cost of preparing it is stated to be Rs. 2 (Rs. 1-8-0 for wool and 8 annas for other expenses) and its sale price Rs. 2-4-0. If the artisan himself weaves the *kambli*, he is reported to retain 4 annas more as wages. The *kamblis* woven at the Maharashtra Charkha Sangh are stated to cost Rs. 1-7-6, including 4 annas for weaving, and fetch Rs. 1-8-0 per *kambli*. The Manager of the Sangh suggests that the quality of the wool should be improved by improving the breed of sheep, that the *Dhangar* women should be assured of an equitable price for their yarn and that the spinner and the weavers should both be taught better and up-to-date methods of work.

Jin (Felt) Weaving.

30. In most of the wool-weaving centres particularly Mhaswad and Mayani the weavers prepare *jins* or woollen carpets. This is a seasonal industry, engaging the attention of artisans for just two months in the rainy season. The necessary wool is purchased locally and dyed by the weavers. Two persons take two days to weave a *jin* measuring 3½ hands by 2½ hands and earn altogether Re. 0-15-0. So the daily wage per head works at Re. 0-3-9. The product is sold in the surrounding villages. It has been suggested that the condition of the industry can be improved if the artisans are given proper training in preparing better type of products.

Soap Making.

31. The investigator visited a small soap factory at Walve. Four persons work in this concern; three from the family and one labourer who is paid Rs. 12 per month. The raw materials with the exception of caustic soda and silicate are produced locally. The tools and appliances consist of a boiling pot, one press, one wooden frame, and one printing machine. All this equipment is reported to have cost Rs. 225. Repairs charges come to about Rs. 50 a year. The total value of the raw materials purchased during a year comes to about Rs. 3,000. The different processes of preparing soap take about 8 days. Washing soaps are sold at Rs. 8 per cwt. for the inferior kind and Rs. 20 per cwt. for the superior kind. Coloured and toilet soaps are also made, their maximum selling price being Rs. 30 a gross. In addition to soaps, scented oils are also manufactured on a small scale, mostly during the *Divali* period. It is stated that the net earnings come to about 5 per cent. to 7 per cent. on washing soaps and about 10 per cent. on toilet soaps. Soaps are sold locally and sometimes exhibited in fairs. The manufacturer complains that he is much handicapped for want of finance and has to face the competition of both Indian and foreign large-scale soap manufacturers.

Leather Industry.

32. The important centres of tanning in the district are Satara, Khatav, Dahiwadi and Mhaswad. The investigator reports that at Satara there are about 100 houses of tanners. At other places the number of tanners varies from 7 to 25. In all these centres, the industry is reported to be in a depressed condition.

33. The tanners are reported to get their supply of raw hides and skins from Bombay and sometimes locally. All of them are following the old and crude methods of tanning. It is estimated that a family of 3 to 4 persons engaged in tanning hides hardly get Rs. 10 for their work for forty-five days. The economic condition of the tanners is reported to be very bad and it has been suggested that these tanners should be trained in new methods of tanning. The tanners at present sell their tanned leather in the local and Bombay markets.

34. The condition of the shoe-makers of the district is not much better. Most of them work for agriculturists, but the preparation of leather *mots* or water carriers is now reported to be a dead industry. Their earnings from shoes or *champals* are stated to be only about a rupee per week. About two pairs of shoes are prepared in a week. Almost all the *chamars* have now taken to agricultural labour as a subsidiary occupation and are reported to be earning from 6 annas to 8 annas a day during the agricultural season.

Other Artisans.

35. These consist of the carpenters, blacksmiths, potters and rope-makers. Most of these work for the agriculturists on the *balut* system, i.e., the artisans are paid for their work in fixed quantities of grain. A carpenter usually takes four days to prepare a plough and is given four *payalis* of grain. But whenever there is work of building houses or making furniture, etc., the carpenters are paid in cash and the usual rate is stated to be about 12 annas to Re. 1 per day. A blacksmith gets about 7 maunds of grain a year for doing work for the agriculturists. His work consists of repairing ploughs, carts and other agricultural implements. His income from other work for which he is paid in cash is estimated to be about Rs. 40 per year. A potter is said to get 3 maunds of grain per year for *balut* work and about Rs. 10 to Rs. 15 per annum from other work particularly from the sale of country tiles. Similarly the rope-makers get about 3 to 4 maunds of grain for *balut* work which consists of supplying ropes to the agriculturists for their ploughs and carts.

Possibilities of new Industries.

36. Fowl breeding is reported to be carried on by the agriculturists on a small scale. The village improvement schemes have encouraged this industry by opening poultry farms at Yellur, Khanapur, Mahuli, Gardi, and other villages and by supplying leghorns for improving fowl

breeding. It seems that if systematically organised, the poultry industry can well be developed in the district.

37. The *rami* plant grown wildly in the district is reported to yield good fibre which could be used for preparing carpets, floor cloth, ropes, etc. At present only the *mangs* are reported to be preparing ropes out of this fibre. As they are ignorant of up-to-date methods, the quality of the rope is said to be crude. It has been suggested that this industry can be organised by developing large plantations of the *rami* plant and installing simple machines for separating and preparing the fibres, and for weaving them into carpets, floor-cloth, etc.

38. It has been further suggested that as groundnuts are grown in large quantities in the district, the husks of the nuts could be usefully utilised for manufacturing rough packing paper. At present these husks are used as fuel. Another commodity which can be usefully utilised is the bagass of the sugarcane. On the Krishna canal, sugarcane is an important crop and large quantities of bagass are at present used only as fuel. It is stated that cheap paper boards can be manufactured out of this article.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

SHOLAPUR

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators, on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data

regarding the condition of small-scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small-scale and cottage industries of the Province ; and as persons engaged in small-scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province ; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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SHOLAPUR.

Position and Area.

The district of Sholapur lies between 17° 8′ and 18° 33′ north latitude and 74° 37′ and 76° 26′ east longitude and occupies an area of 4,569 square miles. It is bounded on the north by Ahmednagar district and the Nizam's Territory, on the east by the Nizam's Dominions and the State of Akalkot, on the south by Bijapur district and the States of Jath and Miraj and on the west by Aundh State, Satara district, Phaltan State and Poona and Ahmednagar districts.

Physical Features.

2. Except north of Barsi, west of Madha and south-west of Malsiras and of Karmala, where there is a good deal of hilly ground, the district is generally flat or undulating. Most of the surface rolls in long low uplands separated by hollows with an occasional level. The chief rivers are the Bhima and its tributaries the Man, the Nira and the Sina, all flowing towards the south-east with the exception of the Man which runs north-east for fifty miles within the limits of the district. Besides these there are several minor streams.

Climate and Rainfall.

3. The climate, except from March to May, is healthy and agreeable. March to May, the climate is hot and oppressive in the day time though cool at night. The rainy season is pleasant. The annual rainfall averages about 28 inches, being on the whole scanty and uncertain. The duration of the rainy season is short.

Population.

4. The district has a total population of 877,520 persons of whom 638,546 live in rural areas consisting of 708 villages while the remaining 238,974 are to be found in 9 towns. The following are the important towns in the district :—

	Population.
Sholapur	144,654
Pandharpur	29,460
Barsi	27,610

The percentage of the urban population to the total population comes to about 27·2 which is higher than the provincial rate (23·3 per cent.).

According to the Census returns of 1931, the total number of principal workers in the district is 317,556 of whom 242,166 are males. The occupational distribution of that number is as follows :—

Exploitation of animals, vegetation and minerals ..	198,075
Industry	67,672
Transport	4,279
Trade	13,350
Public force and Administration	7,934
Professions and liberal arts	5,208
Living on their income	698
Domestic service	2,912
Insufficiently described	11,660
Unproductive	5,768
Total ..	317,556

Not all the 198,075 persons shown against "exploitation of animals, vegetation and minerals" are engaged in agriculture. The following figures further classify the persons included under this head :—

Cultivation	186,285
Forestry	388
Stock-raising	10,946
Fishing and hunting	456
Total ..	198,075

Thus in addition to the 67,672 persons shown as engaged in industries according to Census classifications, 11,790 persons were engaged in such industrial occupations as forestry, stock-raising and fishing and hunting. The total number of the industrially occupied persons, therefore, comes to 79,462 persons or about 25 per cent. of the total principal workers in the district.

Health and Medical Facilities.

5. Some indication of the health conditions of the district is obtained from the vital statistics published by the Director of Public Health. The mean ratio of births per thousand for the five years ending 1937 was as high as 44·90 as compared with the provincial ratio of 40·11. The mean ratio of deaths for the same period was, however, 33·04 per thousand as against the provincial ratio of 27·35. The survival rate therefore is only 11·86.

There are five hospitals, two maternity hospitals, one leper hospital and nine dispensaries in the town of Sholapur. Of these only one hospital is maintained by Government and one by Railway Authorities. The Municipality maintains one maternity home and four dispensaries. The remaining institutions are maintained by missions and from private funds. At Pandharpur there is one hospital which is maintained by a mission. In addition to these, there are twenty-two dispensaries in the district, of which fifteen are maintained by the District Local Board, four by Municipalities, two by a mission and one by Government. There are 82 doctors in the district. Of these 47 are in Sholapur town. The proportion of doctors in rural areas comes to one per 21,200 persons.

Literacy and Educational Facilities.

6. According to the Census of 1931, 62,906 persons or about 7 per cent. of the total population were returned as literates. The figure is low as compared to the percentage of literacy in some other industrial districts like Ahmedabad and Poona.

The educational facilities available in the district are summed up in the following statement for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary Schools	609	60,172
Secondary (including lower Secondary and English teaching) Schools ..	25	3,886
Industrial, Commercial and Agricultural Schools	4	196

Of the 708 villages in the district only 428 villages had schools in them.

Transport Facilities.

7. The district is traversed by the Great Indian Peninsula Railway, by a small length of the Madras and Southern Maratha Railway which joins the former at Hotgi, and by the Barsi Light Railway.

The total length of metalled and unmetalled roads in the district in 1937–38 was 480 miles and 550 miles respectively.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 2,924,117 acres of which 2,243,968 acres constitute the gross cropped area. Current fallows constitute 355,140 acres while the area of land not available for cultivation is nearly 345,641 acres inclusive of 89,273 acres under forests. There are 21,124 acres which are returned as culturable waste or theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area :—

Description of Crops.	Area in acres in 1937–38.
Rice	4,158
Wheat	26,502
Barley	1,009
Jowari	1,438,451
Bajri	146,838
Maize	6,943
Gram	57,541
Other food grains including pulses	99,393
Linseed	7,434
Sesame (*til*)	5,474
Groundnuts	108,649
Castor seed	852
Other oil-seeds	109,174
Condiments and spices	8,213
Cotton	46,694
Other fibres	7,003
Sugarcane	2,846
Tobacco	1,429
Other drugs and narcotics	367
Fodder	157,356
Fruits and vegetables	7,429
Miscellaneous crops	213
Total ..	2,243,968

It will be noticed that the important commercial crops of the district are groundnuts and cotton which account for a considerable portion of the cropped area. Among food grains, jowari is the staple crop.

Fruits and vegetables accounted for an area of 7,429 acres in 1937–38. Fuller details regarding the area under this money crop were called for from the Department of Agriculture and the information which was supplied by that Department in respect of 1938–39, is given below :—

	Acres in 1938–39.
Vegetables.	
Potatoes	48
Sweet potatoes	1,577
Carrot	441
Radish	71
Others	1,055
Total ..	3,192
Green vegetables.	
Fenu-greek (*methi*)	131
Edible Hibiscus (*Bhendi*)	140
Water Melon	77
Others	1,789
Total ..	2,137
Fruits.	
Plantain	813
Mango	109
Lime	218
Orange	62
Pomegranate	154
Guava	494
Others	88
Total ..	1,938
Total, Fruits and Vegetables ..	7,267

The district had 157,356 acres under fodder crops in 1937–38. According to the Census of cattle taken in 1934–35 the details of live-stock in the district were as follows :—

Bulls and Bullocks (breeding, working and young stock)	234,093
Cows (Do. do.)	173,568
Bull Buffaloes (Do. do.)	21,168
Cow Buffaloes (Do. do.)	68,316
Sheep and goats	372,821
Horses and Ponies	7,666
Donkeys	3,836

Of these the milch cattle numbered 122,066 consisting of 84,599 cows and 37,467 cow-buffaloes. The chief breeds of cattle are the *khilari*, bred by *dhangars*; the *deshi*, raised by *lamanis* and breeds from Malwa, Gujarat and Gokak in Belgaum. The *khilari* breed is the best though *deshi* is the commonest. The *dhangars* keep flocks of sheep while the poorer people keep goats.

Survey of Resources : Minerals.

9. The district is comparatively poor in minerals. The Gazetteer states that except trap or basalt used as building stone and for road metal and modular lime-stone, the district has no mineral products.

Survey of Resources : Forests.

10. The same can be said about the forests in Sholapur. The dry shallow soils of the uplands are said to be not at all suited for trees. The forest lands are of two classes—scrub forests and *babul* meadows. The scrub forest is found on the hills and *babul* meadows occur all over the district. On the whole, the forests of the district are poor and yield only firewood and grass for local consumption.

Survey of Resources : Power.

11. There are three electric supply companies in the district. The figures of their output are given below :—

	Units generated.	Total Units sold.	Units sold for industrial purposes.
Sholapur Electric Supply Company ..	725,720	619,998	287,746
Barsi Electric Supply Company ..	220,203	178,483	124,788
Pandharpur Electric Supply Company ..	43,378	39,040	....

Survey of Resources : Capital.

12. There were 208 agricultural credit societies with a working capital of Rs. 17·29 lakhs in 1937–38 and 44 non-agricultural societies with a working capital of Rs. 9·65 lakhs during the same year. In addition there were two Central Co-operative Banks, one at Barsi and the other at Sholapur. During 1937–38 their working capital was Rs. 5·31 lakhs and Rs. 16·23 lakhs respectively. Besides these, there were 66 post office savings banks in the district with 12,366 accounts current in them at the end of 1937–38. The balance to the credit of these accounts was reported to be Rs. 21·3 lakhs. During the same year postal cash certificates to the value of Rs. 3·5 lakhs were also sold. The Imperial Bank of India and the Central Bank of India have their branches in the town of Sholapur.

Industries in the District—General Survey.

13. It has been estimated that the principal workers engaged in industrial occupations in the district number 79,462 including the 11,790 persons engaged in forestry, stock-raising and fishing. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	225
Butchers	655
Tailors, milliners, etc.	2,142
Washing and cleaning	1,678
Barbers, hair-dressers, etc.	2,127
Scavenging	509
" Total ..	7,336

The remaining 72,126 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	388
Stock-raising	10,946
Fishing and hunting	456
Cotton ginning, cleaning, etc.	20,301
Cotton spinning, sizing and weaving	17,520
Rope, etc., making	4,359
Silk manufacture	658
Leather	504
Carpenters	2,623
Basket-making	975
Blacksmiths	1,055
Workers in brass, copper and bell-metal and other metals	463
Potters	1,718
Vegetable oils	782
Boot, shoe, etc., making	2,409
Lime burners, cement workers, etc.	3,876
Jewellers and ornament makers	1,191
Other miscellaneous industries	1,902
Total ..	72,126

LIBRARY

Of these, 21,409 workers were employed in concerns coming under the Indian Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund ..	2	1	263	124
Textiles	11	120	19,237	22,460
Engineering	3	6	305	350
Food, drink and tobacco ..	..	8	....	367
Chemicals, dyes, etc. ..	1	8	80	333
Paper and printing	..	2	....	27
Processes re : wood, stone and glass	1	1	76	25
Processes re : hides and skins ..	..	1	....	32
Seasonal factories	29	34	1,448	1,718
Total ..	47	181	21,409	25,436

Most of the increase in the number of factories in 1938 is due to the extension of the Factories Act to smaller concerns.

14. The investigator, Mr. N. M. Joshi, spent 18 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the cottage and small-scale industries of the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on the other data available to the Committee.

Handloom Weaving.

15. The investigator interviewed the handloom weavers at Sholapur, Valsang and Sangola. According to the Collector of Sholapur, there must be at least 20,000 persons engaged in this industry in Sholapur district. The weavers come mostly from the *Sali* and *Koshti* communities. The industry is partly organised in small factories and partly on a cottage basis. The yarn used consists of 20s, 30s, 40s, 60s, 80s, 2/64s, 2/84s, 2/80s, 2/120s and 2/160s pure silk and artificial silk. Most of the yarn below 40s is Indian and the rest foreign. The products are *band* and *maheshwari sarees*, fancy *patals* and artificial silk *patals*. It is stated that on an

average 4 fancy *patals* can be produced on a loom per week. The usual markets for the products are Shahabad, Poona, Bombay, Nasik, Ratnagiri, etc.

16. Almost all the *karkhandars* buy the raw materials mostly on credit and have to pay about 1 anna more per 10 lbs. It is rather interesting to note that all the *karkhandars* who replied to the questionnaires reported themselves to be in debt. One of them put his indebtedness at Rs. 40,000 and the rest put it between Rs. 5,000 to Rs. 10,000. The rate of interest paid by them, is stated to be between 9 to 12 per cent. The *karkhandars* complain bitterly about the steady decline in prices of *sarees*. One of them supplied the following data about the fall in prices :—

	Prices of Sarees					
	1930.			1938.		
	Rs. a. p.		Rs. a. p.	Rs. a. p.		Rs. a. p.
Maheshwari	2 12 0	to	3 4 0	1 12 0	to	2 0 0
Fancy *patals*	4 0 0	to	4 8 0	2 0 0	to	2 8 0
Ilkal	4 8 0	to	5 0 0	2 12 0	to	3 4 0

The steady lowering of the prices is reported to leave very little margin between the selling prices and costs. And due to the uneconomic rates the *karkhandars* find it difficult to get a return of even 2 per cent. on the capital invested. They attribute the fall in prices to the cut-throat competition from powerlooms and mills. *Patals*, similar to theirs produced by the powerlooms are sold for 8 annas less. In certain types of production, the competition was so fierce that they had to give up that kind of production. The *karkhandars*, therefore, want Government to give them protection against the competition of powerloom factories and mills. They assert that the handloom industry is essential for national prosperity and that they are fully justified in claiming protection. In this connection the following remarks of the Collector of Sholapur are relevant: "The problem of protection against mill-made goods is difficult since this is a major industry employing about 24,000 people in this district and the mills themselves have to face Japanese competition and also the competition of mills in H. E. H. the Nizam's Dominions where the labour acts etc., do not apply and production costs are less." The *karkhandars* also urge that some suitable marketing arrangements should be provided by Government. During the rainy season and other slack periods, stocks worth thousands accumulate and they find it extremely difficult to carry on. Further it is also urged that arrangements should be made to give them capital at low rates of interest.

17. There are also a considerable number of artisans who work on "*assami*" lines. The *assamis* work on a contract basis for the *karkhandars* or capitalist dealers. They are given cash advances or advances in the form of yarn. The fluctuations in the yarn prices are borne by the financiers while the fluctuations in the prices of *sarees* have to be borne by the *assamis*. Each *assami* has looms varying in number from 2 to 30. The financier dictates the types of products to be produced; and the skill of the *assami* lies in adjusting production to these demands. The *assami* in turn employs weavers on contract basis. These workers stay in the premises of the *assami*, free of rent. On an average, they work from 8 to 9 hours. It is perhaps conditions like these which have prompted the Collector of Sholapur to remark, "that the industry is partly organised in small factories, in which I have reason to believe the labour is sweated and I know the working conditions are deplorable". The labourers are also given loans free of interest by the *assamis* out of funds advanced by the *karkhandars*. The chief difficulty of the *assamis* is want of capital. When the industry was prospering about 20 years back the *sowcars* gave them large advances, sometimes to the extent of Rs. 1,000 at a time. Today they get no more than Rs. 100. They, therefore, request financial help from the Government. They also desire improvement in working methods, but stated that most of these improvements like beam warping could not be undertaken for want of adequate financial aid. They also want automatic dobbies to be supplied to them at low cost.

18. The weavers who work for the *karkhandars* or the *assamis* are paid wages on piece rates. There has been a considerable reduction in the rates of wages paid to these weavers. The following table gives the information supplied by some of these artisans:—

Varieties of *sarees*.	Weaver's wages.	
	1925.	1938.
	Rs. a. p.	Rs. a. p.
Pharaspeti (8 yards × 45") (30s) ..	1 8 0	0 7 0
Ilkal (do.) (do.) ..	0 14 0	0 5 9
Maheshwari (8¾ yards × 48") (60s and 40s)	1 2 0	0 9 6
Nepani (8 yards × 45") (30s and 24s) ..	0 14 0	0 7 0

These people want an improvement in their wages. They realise, however, that unless the condition of the whole industry improves, their wages are not likely to be increased.

19. Of the 125 fly-shuttle looms reported to be working at Sangola about 15 are employed in manufacturing *pasodies*. The rest are producing *sarees* of a coarse variety. 20s and 30s yarn is used both for warp and weft. The investigator reports that for a number of years there has been no change in the type of *sarees* produced except in their

borders. The common types are red and black *chandrakala, popali*, green *khaskasi*, etc. The average weekly output is stated to be about 400 *sarees* and 20 to 25 *pasodies*. The weavers complain that they do not get anything from *saree* and *pasodi* weaving except their wages for the preliminary processes.

20. At Valsang the investigator was told that about 20 years back there were about 350 looms of which more than 60 per cent. were owned by independent weavers and the rest by weavers on contract. Today about 95 per cent. of the weavers have lost their independence and are weaving on a contract basis for the local dealers. They are supplied with the yarn by the *sowcar* and the prices of the *sarees* are fixed for the whole year. The yarn prices, however, fluctuate and deductions are made for it. It is stated that the dealers some time deduct unduly high prices for the yarn supplied. The types of products are black and red *chandrakala*, yellow *popali* with *pharaspeti*, white *khaddi* and white *pharaspeti*, etc. These products are sold in parts of the Sholapur district and in the Nizam's Territory.

21. Both at Sangola and at Valsang the conditions of the weavers did not differ materially from those of the weavers at Sholapur. They suffer very much from the competition of power looms and urge that Government should prevent the power looms from producing coloured *sarees*.

Powerloom Production.

22. The investigator visited the Tikekar powerloom factory near Sholapur. Besides 39 powerlooms, there were also 35 handlooms working in the factory. The total investment of this limited company is reported to be about Rs. 1,48,000. It gives employment to about 122 men, 25 women, and 25 children. Most of them are paid on a piece-rate basis. The yarn which is directly imported from Bombay consists of 50s, 60s, 80s and 84/2s. When purchases are made on credit, interest at the rate of 6 per cent. has to be paid. Both the powerlooms and handlooms are utilised for producing *sarees*. A good portion of the production is sold at the Company's shop at Sholapur and the rest is marketed outside through their agents. It appears that the net profit per *saree* is on an average about 3 annas. The Manager attributes this small margin to the severe competition from Bhiwandi and Ichalkaranji powerloom production. At the latter place especially costs are stated to be very low due to the absence of labour legislation. The demands placed before the investigator by the Manager were: (1) that the raw materials should be made available at low rates by the removal of all import and *octroi* duties and (2) that competition from foreign and Indian States' products should be restricted by the imposition of heavy duties.

Wool Weaving.

23. The investigator visited Sangola and Belawadi in the Sangola taluka to meet the wool weavers. At Sangola, it is stated that some

years back there were 30 looms preparing woollen blankets. At present their number is reduced to 10. The wool yarn is purchased from the local *dhangar* women, who number about, 15 to 20, in the weekly bazar. The prices at which the yarn is purchased differ according to the thickness and length of the hanks. They generally vary from 5 to 12 hanks per rupee. The weavers complain about the lack of uniformity of yarn and feel that some uniformity in the yarn would help them in their production. The cost of producing one *kambli* of the size of 90" × 36" is reported to be Rs. 1–1–3 and the *kambli* is sold at Rs. 1–4–0. The wage is thus Re. 0–2–9 for the whole family working for nearly 2 days. The weekly output is nearly 4 *kamblis* per family. These *kamblis* are generally sold to dealers who come from Pandharpur, Poona, etc. They are not directly sold to the local agriculturists as the latter offer very unattractive prices. The investigator reports that due to the poverty and lack of skill of the artisans, there has been no change in the designs of the *kamblis*.

24. The main complaint of the weavers is about the scarcity and high prices of wool. It is reported that about 75 per cent. of the local production of wool is exported out of Sangola. As a result, the prices of yarn are reported to have gone up by about 25 per cent. About 15 years back, yarn was available at 20 hanks per rupee. The weavers also pointed out to the investigator that there has been a big fall in the consumption of *kamblis*. Due to the increasing popularity of cheap rugs *kamblis* have fallen out of demand and now fetch only Rs. 1–4–0 each, whereas they fetched Rs. 2 some years back. The investigator reports that the industry is in a very decaying condition. The weavers are so ignorant that they could not suggest any means of improving their condition. But the investigator was informed that the wool of Sangola is soft and is suitable for the production of rugs and the need for training the weavers in improved methods was stressed by some of the persons in the locality.

25. Belawadi is at a distance of 12 miles from Sangola. Here it is said that forty years back there were about 1,000 wool weavers' looms; today their number is stated to be only 50. All the weavers belong to the *sangar* community. The yarn is purchased from *dhangar* women in Atpadi (Aundh State), Sangola and the local weekly market. The investigator reports that the economic condition of the weavers at Belawadi seems to be better than that of the weavers at Sangola. They are reported to get about Re. 0–3–6 per *kambli* against Re. 0–2–9 earned by the weavers at Sangola. The areas in which these *kamblis* are marketed are Nagpur, Satara, Ratnagiri, Poona, etc. A majority of the weavers sell their goods to the dealers who come from Sangola once a week.

Hosiery.

26. The investigator was informed that about 4 years back there were 4 *karkhandars* manufacturing hosiery products at Sholapur, but

only one of them is left now. The investigator interviewed this gentleman. The total capital invested by him is nearly Rs. 2,500. He is, however, finding it extremely difficult to get more capital and is forced to work his plant fitfully for about 6 months in a year. During the "off" time he is working as a priest. During the working period, the *karkhandar* employs 3 skilled labourers who are paid monthly on a piece rate basis. The main products are socks, mufflers, underwears, etc., and the raw materials employed are yarn of 10s, 12s, 16s, 18s, 20s and mercerised 2/42s and dyes. Chemicals like caustic soda, bleaching powder, sulphuric acid, etc., are also used. The monthly consumption of yarn is estimated to be worth Rs. 100 and that of dyes and other things about Rs. 15. The manufacturer, however, assured the investigator that if his equipment is fully worked he will require Rs. 1,400 per month for yarn and about Rs. 300 for dyes and other chemicals. The total output is estimated to be worth about Rs. 500. Roughly half of it is taken up by the local consumers and dealers and the remainder is exported to Sangli, Miraj, Jalgaon, Kolhapur and the Karnatak. No canvassing is done and production is partly for orders. Both the purchase of the raw material and the sale of the finished product are strictly on a cash basis. The *karkhandar* states that he gets a net income of about Rs. 60 a month, during the working period.

27. Although the production is profitable the *karkhandar* states that there are many difficulties in carrying on his industry. First is the want of capital at cheap rates. Another obstacle is the severe competition from Japanese and other foreign products. Although prices of Japanese products are the same as his, the stitching and finishing of the former are superior. He, however, emphasised that Japan uses inferior raw materials. To fight this competition he wants the Government of Bombay to give him the necessary capital (about Rs. 2,000) to buy an over-lock stitching machine and a calendering machine. Apart from these, the difficulty of getting the required spare parts of machines in time is reported to result in the dislocation of work and much loss. It is stated that sometimes it is difficult to get the spare parts even in Bombay and orders have to be placed with Japan. He, therefore, urges that Government should see that the spare parts of machinery needed by the hosiery industry are stocked at least in Bombay. He is prepared to welcome technical advice if it is to be had free. According to him the industry has a great future if properly organised and aided by Government.

Tanning.

28. It is reported that there are about 150 tanners at Sholapur. There is one large modern tannery equipped with machines, five *karkhanas* and about 100 independent artisans. The five *karkhanas* employ about 50 wage-earners. The independent artisans take the help of outside labour only on occasions, on piece-rate basis. The

raw materials of the industry consist of raw hides, *chunam*, *babul* bark and *harda*. All these are purchased from the local dealers. The crude bag-method is followed in tanning. Under this method, more than a month is required for finishing a hide. And on each finished hide the tanner gets about Rs. 2 for his labour. As he tans about 8 hides in a month, his income can be estimated to be Rs. 16 a month. The tanners suggested that Government should start a co-operative society for financing them and that Government should debar other communities from entering the business.

Boots and Shoes.

29. At Sholapur the investigator interviewed some artisans engaged in the preparation of boots, shoes and *champals*. About 10 workshops are reported to be manufacturing boots, shoes and *champals*, while in 4 workshops only *champals* are being prepared. The working capital of a workshop preparing boots and shoes, is estimated on an average to be about Rs. 100. On an average this kind of workshop employs about three shoe-makers and one *champal*-maker. Most of the shoe-makers are said to be Madrassis while the *champal*-makers are Deccanis. Almost all of them are employed on piece-rate basis. In the busy season the number of workers is increased. The equipment usually consists of a sewing machine, priced at about Rs. 125, and other tools worth about Rs. 40. In the case of the smaller workshops where only *champals* are prepared machines and tools worth about Rs. 10 only are used. Most of the *champal* makers cannot afford to go in for machines and send the sewing work to bigger shops and pay about an anna per pair of *champals*.

30. The raw materials are purchased on credit from the local *dhors* and dealers. The period for credit is generally 8 days. On an average a workshop employing three shoe-makers and one *champal*-maker can prepare per month about 80 pairs of *champals* and 60 pairs of boots or shoes. These workers are paid at the rate of 10 annas per pair of boots, 8 annas per pair of slippers and 2 annas per pair of *champals*. The products are sold to the local dealers and also to stray customers. The usual selling rates are Rs. 2-4-0 for a pair of shoes, Rs. 2 to Rs. 2-4-0 for a pair of slippers and 8 to 10 annas for a pair of *champals*.

31. The artisans complain of the competition of boots, shoes, etc., manufactured by the big organised factories. Another serious complaint is about the difficulty of realising the sale proceeds of their products. It is stated that the local dealers hardly pay cash against delivery. The money is paid by instalments and some balance is retained as a permanent deposit. Apart from this, the local dealers are said to offer prices lower than those offered by the direct purchasers. For instance, a product which is sold to a customer at Rs. 2 is usually sold to the dealer at Rs. 1-12-0. It is said that due to these difficulties the average income of the larger workshop-owner hardly exceeds Rs. 15 per month. The

smaller work-shop owner of the *champal* maker gets about Rs. 9 per month. The boots and shoe workers stress the need of organising a co-operative purchase and sale society for them. They also want that their sons should be trained as skilled workers at Government expense. And further, they want financial help at cheap rate of interest.

The Leather-bag Industry.

32. It is reported that about 20 years back there were 12 to 15 families in Sholapur engaged in the production of leather bags, money bags, etc. They were in a tolerably good condition. Their products went as far as Madras, Nagpur, Hyderabad, etc. But conditions today have deteriorated to a great extent. The investigator interviewed a few artisans in the bag industry. According to their estimates there are in all 7 to 8 families in the line. All of them are independent artisans. Their production is not for stock and sale, but only for occasional orders. The fitful nature of the trade will be evident from the fact that of the two artisans interviewed, each produced only about 25 bags in a year. But ten years back, one of them used to produce annually 150 bags while the other produced nearly 200. The cost of preparing a bag of 24" × 14" is stated to be Rs. 5½ and the selling price Rs. 8. It takes about 3 to 4 days to prepare a bag. About ten years back, the same bag is reported to have fetched Rs. 11. It is stated that now-a-days hardly 2 bags are produced per month. This means that the income has now dropped to about Rs. 5 per mensem. Most of these men undertake repair work in addition, but the income from this source also is reported to be very meagre.

33. The artisans complain about the competition of steel trunks and of mechine-made bags. Among the difficulties encountered by them in their industry, they mention the high prices of leather due to unrestricted exports and the lack of capital. It is stated that sometimes these artisans have to take advances from their customers even for purchasing the required raw materials. These artisans want Government to start a co-operative society for them to instal machines similar to those at present used by the leather-bag manufacturers at Cawnpore, Bombay and other places. The workers are willing to pay for the use of the machines by small monthly instalments. They also want financial accommodation at cheap rates and raw materials at lower prices.

Mill Belting.

34. For many years past the manufacture of mill-belting has been carried on by a large number of artisans at Sholapur. Eight to ten years back they were said to be in a flourishing condition. But the sales are now reported to have gone down from Rs. 5,000 to Rs. 6,000, to Rs. 500 to Rs. 600 per annum due to outside competition and the increasing use of canvas beltings. The investigator interviewed two artisans engaged in the industry. Both of them also carry on the preparation of roller

skins as a side business. They are independent artisans and one of them has engaged an assistant on a daily wage of Re. 0-12-0. According to them, there are 4 *karkhandars* and 20 independent artisans engaged in this industry at Sholapur. The total number of workers is estimated at 50.

35. The preparation of mill-belts as done by these artisans, does not seem to be a complicated business. The hides are cut by a cutting machine or *rapi* according to requirements. It is then put through a rolling machine and compressed. After this process is over, the joints are prepared by another machine. Finally, the ends are stitched by laces. Of the 20 independent artisans only 2 have the cutting, rolling and joint-making machines (worth about Rs. 800) and the rest do it with their ordinary tools. If work is available, an efficient man can prepare a belt of 25 feet per day. The belts are made of buffalo hides (finished) while the roller skins are prepared from the goat and sheep skins. Both the hides and skins are obtained locally. The market for leather belts is reported to be fast narrowing and canvas beltings are said to be proving an effective substitute. Prices of the belts are consequently daily going down. About 8 years ago 3″ belting fetched about Re. 1 per foot; today it does not bring more than 6 annas. The result of this all has been a drastic reduction in the business of these people. One of the artisans who has an assistant, informed the investigator that round about 1928–29 his total turnover was about Rs. 20,000. Today it is not even Rs. 4,000. The main demand of these people is about finance. They also want marketing facilities.

Leather-cloth Cushions.

36. Some of the bag producers have taken to the production of leather-cloth cushions for motor cars and buses and to repairing motor hoods etc., as their main occupation has almost gone out of their hands. Their number is estimated at 5. Their equipment consists of a leather sewing machine worth about Rs. 280 and other tools and appliances costing about Rs. 10. As they are extremely poor, the machines are purchased on the instalment system.

37. The preparation of leather-cloth cushions is said to give employment for about a month only. During the month when the Police Department usually examines the seating arrangements in the motor buses there is generally a demand for these products. The leather-cloth and other materials required for the cushions are supplied by the bus-owners and the artisans are paid only piece-wages. On an average, for preparing all the cushions required for a motor bus they are paid Rs. 8. This work can be done by one man in about 5 days. As, however, the work is required to be done within a very short time, the cushion-makers take the help of casual labourers who are paid 8 to 12 annas a day. During the month of Police inspection of motor buses, the total volume of work done by all the five artisans who are engaged

in this industry, is estimated to yield them an income of Rs. 200 or about Rs. 40 each, inclusive of the wages paid to the casual labourers. During the rest of the year, these artisans do repairs of old cushions, motor hoods, etc. This work is of an irregular and stray character. They also undertake other casual work which brings them in all about Rs. 60 to Rs. 70. Their income thus does not exceed Rs. 100 to Rs. 110 in a year. Their request is that Government should give them financial help through the co-operative societies. They point out that it is impossible for them to depend upon the leather-cloth cushion industry alone which hardly gives them employment for a month, and that to improve their economic condition, they have to undertake the production of some two or three side products. They are prepared to undertake the production of *mots* or water carriers, seat-covers for cycles and such other articles on a large scale if adequate financial and marketing facilities are made available to them.

Soap-Making.

38. The investigator reports that there are only three soap-making establishments at Sholapur employing about 10 wage-earners. All of them work throughout the year though during the months from July to February work is rather slack. In one of these establishments, three persons are employed on monthly wages and the equipment consists of tools and appliances worth about Rs. 800. The raw materials used are oils (cocoanut, groundnut, and castor), animal fats, caustic soda, washing soda, silicate of soda, essences and colours. The production consists of washing and toilet soaps. Of these the former by far pedominates. In fact, during the last two years the proprietor has almost given up the production of toilet soaps as his products cannot compete with toilet soaps coming into the district from outside. He now prepares washing soaps and that too mainly for the local dealers. These dealers are said to be offering him very low prices which he has to accept on account of the keen competition in the trade. Formerly, he used to sell his goods to hawkers on credit. But as he lost about Rs. 1,000 thereby, he does not now give any credit to anybody for more than a fortnight. He feels the competition not only of the big organised companies but also of the unorganised individual soap producers. He complains that now-a-days everybody is trying to prepare washing-soaps and that the soap industry is thereby being rendered very unprofitable. He suggests that Government should employ a full time chemist who would analyse the soaps produced in the country and take suitable action against producers of injurious soaps. Secondly, he wants adequate financial facilities from Government. His other suggestions are: (1) that the *octroi* duty levied by the municipality should be refunded upon articles sent out of Sholapur and that (2) some arrangements should be made to give advances on stocks accumulated during the slack season.

Confectionery Works.

39. The investigator visited a confectionery works at Sholapur which employs 2 skilled and 4 unskilled workers. The skilled workers work for about 10 hours a day for about 25 days in a month and get Rs. 12. The unskilled workers get about Rs. 8 to Rs. 10 per mensem. The equipment of the works is stated to be worth about Rs. 300. The products are ordinary peppermint and lemon drops. For preparing these he uses glucose, sugar, essences and colours. Coal, coke and packing tins are also required. Except for the coal and coke which he purchases locally, all products are imported direct from Bombay. He complains that on each cwt. of glucose (priced at Rs. 11-4-0) he has to pay an *octroi* duty of about Rs. 1-4-0. Similar duties are said to be charged on sugar and packing materials. He urges that Government and municipalities should remove such harmful duties.

40. The selling price of two boxes of peppermint and lemon drops is stated to be Rs. 41, while their cost comes to Rs. 39. Hence there is a net profit of Rs. 2. As two boxes are prepared every day for 25 days in a month, the net profits of the proprietors can be estimated at Rs. 50 a month. About half the product is consumed locally and the rest is sent to places like Hubli, Bijapur and Ahmednagar.

Udabatti Production.

41. At Pandharpur, it is reported that there are nearly 15 to 16 *karkhanas* in which *udabattis* are manufactured. The number of persons employed in a *karkhana* varies from 4 to 10. Generally, women are employed for the preliminery processes and are paid at the rate of 2 annas per day. The raw materials used consist of scents, bamboo sticks, saw dust, coal dust, etc., and are locally purchased. Excepting for the preparatory stages when some ordinary appliances are needed, the work is done by hand. The cost of preparing one seer of *udabattis* is stated to be Rs. 2-2-0 and its sale price Rs. 2-8-0. The average output is reported to be about 12 seers a day. During the rainy season the work is suspended. It is stated that recently some small artisans have taken to the production of *udabattis* and have forced down the prices. The demand in other areas is also reported to have declined due to production in centres like Poona, Nasik, Hukeri, Bijapur, etc. The local industry is now mostly dependent upon the local pilgrim demand. Even this is reported to be dwindling.

Kunku Manufacture.

42. At Kem in Karmala taluka and at Pandharpur the investigator interviewed the manufacturers of *kunku*. This industry is seasonal due to seasonal demand and seasonal effects on production processes. The industry at Kem has been localised in that centre for the last 150 years. It is reported that this concentration of the industry is due to

the special characteristics of a local well, the water of which gave a peculiar brightness to *kunku* when it was being manufactured according to the old processes in which lemon, alum and borax were chief constituents of dyeing turmeric. Some 30 years back there were said to be 25 *karkhanas* manufacturing this product. But the decay of this industry began when sulphuric acid replaced lemon as a constituent and the process ceased to depend upon any special characteristics of water. Incidentally it may be pointed out that, when lemon was used in *kunku* manufacture, villages surrounding Kem and other centres used to grow lemons on a large scale. Kem alone imported 25 to 30 carts of lemons per day. Slowly other centres also took up the industry. Chalk dust came to be used for turmeric and cheaper *kunku* was dumped on the market. Hence with the decline in the prices, the local manufacturers have also begun to use the same cheap materials and there has been a deterioration in the product.

43. The entire equipment in an average *karkhana* is worth about Rs. 400. It consists of 2 *chakkies* worth about Rs. 150 each, a few casks worth about Rs. 40, and other materials worth about Rs. 60. In addition a bullock or two are maintained, wherever bullock-driven *chakkies* are used. The cost of preparing one bag of pure *kunku* (90 seers) is reported to be Rs. 32–8–6. The amount realised from sales, it is stated, only comes to Rs. 20. The manufacturers, therefore, mix up chalk to the extent of 75 per cent. The price of chalk was stated to be Rs. 8 per bag. The industry is thus suffering both from adulteration and from competition from other centres.

44. Formerly Kem products used to go to Berar, Central Provinces, Kathiawar and Karnatak. But the growth of the industry in other centres consequent upon the changes in the processes and the use of chalk dust is reported to have very much restricted the market. Now the usual markets are Sholapur, Bijapur, Dharwar, and Ahmednagar. The manufacturers suggest that: (1) Government should finance them in the purchase of raw materials, (2) some arrangements should be made for storing the raw materials, (3) the railway rates on imports of raw materials should be lowered, and that (4) Government should persuade the Nizam's Government not to levy taxes on the exports of turmeric. They also desire that some restrictions should be placed on the adulteration of *kunku* as also on the cut-throat competition.

45. At Pandharpur which is a big pilgrim centre the number of shops selling *kunku* is reported to exceed 300 during the season. Thus the consumption of *kunku* is considerable. Still there are only 2 manufacturers. One of them whom the investigator interviewed stated that 75 per cent. of his production was for the local pilgrim market and the rest was sent to Bombay. He employs six women and two men in the slack season. During the two busy months of the trade, the number of persons employed is sometimes even 30. The women are paid 3½ annas to 4 annas per day. The men get about Rs. 10 per mensem. The annual consumption of turmeric and other requisites in this *karkhana* is stated to be between Rs. 10,000 to

Rs. 20,000. Due to the seasonal nature of the demand the prices are reported to be fluctuating a good deal, and there is also a general complaint against the adulterated products of other centres. The outside manufacturers are also said to dump their cheap products during the pilgrim season.

Oil-seeds Crushing.

46. Due to mill competition the village oil-crushing industry is reported to be continuously declining. It is stated that some 20 years back there were nearly 600 *ghanis* with a yearly output of 2,000 maunds of *khardi* oil. The industry was carried on by some on a very extensive scale and there were actually 3 to 4 *telis* who had 50 to 60 *ghanis* each. Now in the whole of Sholapur there are reported to be hardly 70 to 80 *ghanis*, and the industry is now entirely dependent upon a restricted demand for edible *khardi* oil and cake which is popular with the farmers. Groundnut is rarely crushed in the country *ghanis* and if it is crushed at all, it is for adulteration of *khardi* oil.

47. The main difficulties of the *telis* are reported to be: (1) high prices of raw materials due to shrinkage in the area under *khardi* seeds, (2) the mill-crushing of groundnuts which yields a higher percentage of oil and (3) a greater demand for groundnut oil in place of *khardi* oil. They suggest that (1) Government should give them capital at low rates of interest so that they can stock their raw materials when prices are low, (2) technical improvement in the *ghani* should be effected with a view to reduce the cost of production, (3) as *khardi* oil is better for health, restrictions should be placed on the use of mill pressed groundnut oil for edible purposes and lastly (4) restrictions should be placed on the growing of the groundnut crop in those areas where *khardi* seed is grown.

Other Industries.

48. Among other industries in the district may be mentioned the *bidi*-turning, rope-making, carpentry, etc. There are a number of *bidi*-turning small factories in Sholapur employing mostly women. These *bidi*-turners complain about the severe competition from the Nizam's Dominions. Rope-making is carried on mostly by *Mangs* who sell their products in their own localities. Carpentry, blacksmiths' work, etc., are industries which are mainly carried on to meet local demands.

Possibilities of New Industries.

49. The possibilities of starting new industries do not appear to be many. Sholapur is comparatively poor both in minerals and forest products. The district, however, produces a large quantity of oil-seeds and it is a question whether these cannot be locally utilised by oil expellers instead of being exported outside. The investigator suggests the production of rugs as a new cottage industry.

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Report of the Bombay Economic and Industrial Survey Committee 1938-1940

Volume II

Notes on the Economy and Industries in the different Districts of the Bombay Province

SURAT

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PREFATORY NOTE.

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, cannot have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the

limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE.

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January, 1941, Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages, in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March, 1941.

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SURAT.

Position and Area.

Surat district lies between 20° 17′ and 21° 28′ north latitude and 72° 35′ and 73° 29′ east longitude and covers an area of 1,651 square miles. It is bounded on the north by the Broach district and the Baroda State; on the east by the States of Baroda, Rajpipla, Bansda and Dharampur; on the south by the Thana district and the Portuguese territory of Daman; and on the west by the Arabian Sea.

Physical Features.

2. The district forms an alluvial plain stretching from north to south for about eighty miles, and with a gradual slope from east to west. In the north along the delta of the Tapti, the plain stretches from east to west for about sixty miles, but it gradually contracts till in the extreme south its breadth is only about fifteen miles.

There are few hills and except the Kim and the Tapti in the north, there are no rivers of any great size. The deep navigable tidal estuaries of the southern streams are, however, of importance in promoting coasting trade.

The district is divided into three belts. Nearest the sea is a barren stretch of sand drift and salt marsh, behind that a richly cultivated plain, and further east a poorer and more open land rising gradually into a wild tract of hill and forest.

Climate and Rainfall.

3. The climate is healthiest along the coast, where the temperature is rendered equable by the sea-breezes. The Dangs, except at certain seasons, are unhealthy.

The rainfall is heaviest in the three southern talukas where it averages sixty-six inches. In the rest of the district it varies from 40 to 53 inches.

Population.

4. The district has a total population of 693,613 persons of whom 551,010 live in rural areas consisting of 780 villages while the remaining 142,603 are to be found in 5 towns. Of these the following towns are the more important:—

	Population.
Surat	98,936
Bulsar	19,481
Rander	12,344

The proportion of urban population to total population is 20·6 per cent,

According to the Census returns of 1931, the total number of principal earners in the district is 197,824 of whom 159,178 are males. The occupational distribution of that number is as follows :—

	Population.
Exploitation of animals and vegetation ..	128,008
Exploitation of minerals	184
Industry	22,603
Transport	6,257
Trade	10,514
Public force and administration	4,443
Professions and liberal arts	5,356
Living on their income	685
Domestic service	830
Insufficiently described	18,179
Unproductive	765
Total ..	197,824

The percentage of the industrially occupied persons to the total principal earners comes to 11·6. But not all the 128,008 persons shown against "exploitation of animals and vegetation" are engaged in cultivation. That figure can be further analysed as follows :—

Cultivation	122,170
Forestry	208
Stock-raising	3,661
Fishing, etc.	1,969
Total ..	128,008

It will thus be seen that 5,838 persons are engaged in occupations like forestry, stock-raising and fishing which are more or less industrial occupations. Adding these to the 22,603 persons shown as engaged in industrial occupations according to Census classification, the total principal workers in the district, who are industrially occupied, number 28,441.

Health and Medical Facilities.

5. Some indication regarding the health conditions in the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 43·46. The mean ratio of deaths for the same period was 27·45 per thousand, thus yielding a survival rate of 16·01 per thousand which is considerably higher than the provincial rate (12·86 per thousand).

There are five hospitals, three maternity homes, a leper hospital, and two dispensaries in Surat town. Of these only one hospital is maintained by Government while the others are maintained from private funds.

At Bulsar there is an eye hospital and a Mission hospital while at Navsar there is a hospital run by a private doctor. There are in all eighteen dispensaries in the district excluding Surat town. Of these eleven are maintained by the District Local Board, three by municipalities, two by the Government of India, and the remaining two by the Sachin State and from private funds respectively. The total number of doctors in the district is reported to be 145. In Surat town alone there are 84 doctors. In the rest of the district the proportion of doctors to population comes to one per 8,900 persons.

Literacy and Educational Facilities.

6. According to the 1931 Census, 114,940 persons are returned as literates thus constituting a literacy percentage of 16·5 for the district.

The following statement sums up the educational facilities in the district for the year 1937–38 :—

Description.	Number of Institutions.	Number of Pupils.
Primary schools	582	68,901
Secondary (including lower secondary and English teaching) schools	65	9,719
Commercial, industrial and agricultural schools ..	5	298

Of the 780 villages in the district, 505 villages had schools in them. The district has thus more educational facilities than most of the other districts of the Province.

Transport Facilities.

7. The B. B. & C. I. Railway main line runs through the district parallel to the coast. Besides this, the branch lines of the Baroda State Railway, the Tapti Valley Railway and the Billimora-Kalamba Railway also pass through the district. Moreover, all along the coast there are *bundars* (sea-ports) at a short distance from each other. All the important towns in the district are connected with railway stations and each other by good roads. The total length of roads maintained by the Public Works Department and the local authorities in 1937–38 was 321 miles of metalled and 338 miles of unmetalled roads.

Survey of Resources : Agriculture and Pasture.

8. The district has a total area of 1,058,197 acres of which 837,392 acres constitute the gross cropped area. Current fallows constitute 21,811 acres. The area under forests is 46,630 acres while other

uncultivable land measures 176,523 acres. There are 44,440 acres which are returned as culturable waste or land which is theoretically available for cultivation.

The following table gives details of the classification by crops of the cultivated area for the year 1937–38 :—

	Area in acres.
Rice	110,151
Wheat	13,861
Jowari	75,414
Bajri	3,661
Ragi	6,394
Gram	3,190
Other food grains including pulses	90,584
Sesame (*til*)	1,098
Groundnuts	6,760
Castor seed	7,647
Other oil-seeds	129
Condiments and spices	1,626
Sugarcane and other sugars	3,031
Cotton	197,975
Other fibres	3,048
Tobacco	539
Fodder	301,998
Fruits and Vegetables	10,142
Other miscellaneous crops	144
Total ..	837,392

Among food crops, rice and jowari are the important ones while cotton in the most important commercial crop of the district. Nearly one-fourth of the total area under cultivation is under cotton.

Fruits and vegetables accounted for an area of 10,142 acres during 1937-38. More detailed information in respect of these crops was obtained from the Department of Agriculture which supplied the following details in respect of 1938–39 :—

Vegetables—	Acres in 1938–39.
Potatoes	55
Sweet potatoes	41
Yam	60
Elephant foot	335
Onions	350
Others	19
	860

	Acres in 1938-39.
Green vegetables—	
Tomatoes	281
Fenugreek	45
Edible Hibiscus	456
Musk melon	19
Water melon	28
Others	2,872
	3.701
Fruit trees—	
Plantain	467
Mango	5,599
Guava	74
Others	241
	6,381
Total, Fruits and Vegetables ..	10,942

The area under fodder crops was nearly 302,000 acres in 1937-38. The district is in the main a cultivating and non-breeding district but in the Olpad, Chorasi, Bardoli, Jalalpur and Chikhli talukas, *kadbi* is plentiful and a fair number of useful *talabda* cattle which have a high reputation are bred by cultivators. The cows and buffaloes of the district are much esteemed—the cows for their appearance and the buffaloes for their yield of milk. The Bulsar taluka is famous for its breed of *patiri* goats which are good milkers and highly prized in Bombay. According to the Census of cattle taken in 1934-35 the details of live-stock in the district are as follows:—

Bulls and buffaloes (breeding, working and young stock)	166,987
Cows do. ..	111,146
Buffaloes do. ..	17,051
Cow-buffaloes do. ..	98,789
Sheep and goats	128,601
Horses and Ponies	2,136
Donkeys	383

Of these, milch cattle number 91,538 consisting of 53,454 cows and 38,084 cow-buffaloes.

Survey of Resources : Minerals.

9. The Gazetteer states that besides stones for building purposes iron-stone is the only other important mineral product available in the district. Among different varieties of building stones may be mentioned the limestone found at Tadakeshwar, sandstone found at Majlav and the laterite at Nagama. Trap stone is found at Goji and Waghecha in the Bardoli sub-division and also at Bodhan. *Kankar* or Nodular limestone used for metalling roads is found in the Bulsar and Pardi sub-divisions. Iron-stone is also said to be found in the Bulsar and Pardi sub-divisions. The Gazetteer mentions that though no traces of the manufacture of iron remain, specimens of slag, evidently from old furnaces were found at Bodhan. Metallic sand which accumulates at the mouths of all the rivers and is available in the purest type on the Dumas side of the Tapti, is used only for drying up ink. *Akik* stone is also found at Roswad and Tadakeshwar and is used for making buttons, ear-rings, beads, etc. ; it is sent out to Cambay where it is cut, polished and manufactured into the above articles. At Majlav, yellow earth is found and is used for painting houses.

Survey of Resources : Forests.

10. The area under forests is 46,630 acres nearly all of which is in the eastern and hilly half of the Mandvi taluka, the rest being scattered in small areas over Chikhli, Bulsar and Pardi talukas and the Valodpeta. The forests are principally teak pole ones which on the flatter areas are very fine but on the higher hills rather poor. Jungle woods and inferior varieties of soft woods are also found. *Babul* is common and makes a valuable fuel. Among minor forest products found in the district can be mentioned bamboos, *apta* and *temburni* leaves from which *bidis* are made, *harda* fruits, etc.

Survey of Resources : Power.

11. There are three electric supply companies in the district. The figures of their output are given below :—

	Units generated. (000s)	Total Units sold. (000s)	Units sold for power purposes. (000s)
The Surat Electric Supply Company ..	4,441	3,656	2,511
The Rander Electric Supply Company.	242	223	125
The Bulsar Electric Supply Company..	323	284	200

Another company—the Udwada-Wapi Electric Supply Company—has been recently started but it has not yet begun to supply electrical energy.

Survey of Resources : Capital.

12. There were 171 agricultural co-operative societies in the district at the end of 1937-38 and their working capital amounted to Rs. 14·92 lakhs. The non-agricultural societies numbered 32, and their working capital was Rs. 34·44 lakhs. During the same year, the Surat District Central Co-operative Bank had a working capital of Rs. 44·02 lakhs. In addition, there were 137 post office savings banks with 35,380 accounts current at the end of 1937-38, the balance at their credit being Rs. 106·1 lakhs. During the same year postal cash certificates amounting to Rs. 32·1 lakhs were sold. The Bank of Baroda, the Bank of India, the Central Bank of India and the Imperial Bank of India, have all their branches at Surat. The district thus appears better provided with capital than many other districts in the Province.

Industries in the District—General.

13. The population engaged in industrial occupations has been estimated at 28,441 inclusive of 5,838 persons engaged in forest industries, stock-raising and fishing. Of these the following classes of industrial workers are more or less suppliers of pure services and cannot be classed under makers of manufactured commodities :—

Sawyers	358
Butchers	277
Tailors, milliners, etc.	1,943
Washing and cleaning	510
Barbers, etc.	1,193
Scavenging	340
Total ..	4,621

The remaining 23,820 may be regarded as persons engaged in industry. The Census tables give the following classified statistics :—

Forest industries	208
Stock-raising	3,661
Fishing, etc.	1,969
Cotton ginning, cleaning, etc.	318
Cotton spinning, sizing and weaving	2,988
Rope, etc., making	385
Silk spinning and weaving	446
Dyeing, etc.	204
Lace, embroideries, etc.	2,528
Leather	860

Carpenters	3,343
Basket-makers, etc.	495
Blacksmiths, etc.	627
Workers in brass, copper, etc.	608
Potters	472
Brick and tile making	220
Vegetable oils	761
Boots, etc., making	302
Lime burners, etc.	1,001
Jewellers and ornament makers	1,235
Other industries	1,189
Total ..	23,820

Of these, 4,028 workers were employed in concerns coming under the Factories' Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Textiles	10	71	1,029	3,338
Engineering	1	5	159	223
Minerals and metals ..	....	2	....	32
Food, drink and tobacco ..	....	3	....	42
Chemicals, dyes, etc. ..	2	2	139	267
Paper and printing ..	5	10	118	188
Processes regarding wood, stone and glass	1	7	21	188
Seasonal factories.. ..	33	33	2,562	2,643
Total ..	52	133	4,028	6,921

Most of the increase in the number of factories, is due to the extension of the Factories' Act to small concerns.

14. The investigator, Mr. A. B. Trivedi, spent 15 days in the district and interviewed a number of artisans and traders working in the district. The following notes on some of the existing cottage and small scale industries in the district are based mainly on the returns and other information collected by the investigator during his stay in the district as also on other data available to the Committee.

Gold and Silver Thread Industry.

15. Surat is the largest centre of the gold and silver thread industry in the Province. Mr. Fernandes in his Report on Art-Crafts of the Bombay Presidency, estimates the number of persons engaged in manufacturing different varieties of gold and silver thread articles at about 20,000. When Mr. B. J. G. Shastri studied the condition of the industry in 1923, he estimated the annual production at Surat to be worth nearly a crore of rupees. From the investigator's report it appears that the industry has not deteriorated to any considerable extent since that period.

There is a large number of establishments at Surat engaged in this industry. Some of them work with electricity. About 12 of them have complete wire drawing machinery. Apart from them, there are about 40 factories which manufacture fine wire. The number of gilding factories which specialise in gold-plating the silver thread is estimated at about 100. There are also many workers who still prepare the gold thread by hand and follow old methods. In addition, there are about 560 establishments specialising in spinning gold and silver thread.

16. The raw materials utilised in the industry are silver, gold and yarn of cotton and silk. A good part of the silk yarn is imported from France, Switzerland and Germany. It is stated that France alone sends to Surat silk yarn worth about Rs. 2 to Rs. 3 lakhs a year. Sometimes silk yarn is also imported from Kashmere by the local merchants. Chinese and Japanese silk yarn is mostly used in the manufacture of silk brocade.

17. The gold thread manufactured, is used in the manufacture of *kinkhab*, lace, *saree* borders, etc. These articles are mostly marketed in the United Provinces, the Punjab, Bombay and a large number of Indian States. The system of sales is such that long-term credits are given and it takes nearly 6 months for the manufacturer to receive the value of the goods supplied. As a result of this system, comparatively large working capital becomes necessary. There is also some export trade to Burma, Siam, Madagaskar, etc. It is reported that prior to 1925, Surat used to send annually embroidery products to Madagaskar worth about Rs. 2 lakhs. This trade has now declined due to the differential duty imposed by the Government of that place. Another difficulty in the way of the Surat industry is stated to be the competition from cheap but more attractive articles imported from

abroad. France is the biggest supplier of gold thread to India. According to Mr. Shastri, the French gold thread looks more impressive as compared with the Surat product. The reason is reported to be that while in France the gold and silver thread is untouched by hand in nearly all the stages of its manufacture, in Surat the thread is very much handled and loses its lustre. The crude method of packing prevailing at Surat is also stated to be another reason why the lustre of the Surat product is much less than that of the French product. It was, therefore, suggested that some little care in preparing and packing the gold and silver thread would enable the Surat artisans to withstand this competition to some extent. The most serious problem before these people, however, is stated to be the competition from imitation gold thread which is imported from abroad and sold at very cheap rates. In addition, the industry is said to be suffering from over production and internal competition. It is also reported that many workers at Surat who have been displaced from other arts and crafts, have now taken to this industry.

18. It is urged that for encouraging the industry Government should remove the existing duty on the import of silver bars, and that the internal competition should be removed by setting up some sort of a co-operative organisation. Further it is suggested that the absorption capacity of the various markets for the different kinds of gold thread products should be carefully studied by Government, so that the industry can be properly planned. Government help is also asked for, in meeting the problem of external competition from cheap substitutes, and in carrying out technical improvements in the wire-drawing and hand working machines as also in the proper mixing of chemicals for dyeing purposes.

Tiki Industry.

19. The *tiki* preparation of Surat is a handicraft industry, and it is estimated that it provides work for nearly 400 workers. The investigator interviewed an outworker who is assisted by about 6 men. His equipment is stated to be worth Rs. 250 and consists of dies, anvils, hammers, tongs, etc. These are all locally prepared. The raw materials of the industry are silver and gold wires. They are supplied to him by the local merchants and he is paid a wage of Rs. 5 per 100 *tolas* of the finished product. Ten years back, the wages were reported to be nearly Rs. 8 per 100 *tolas*. The income of the outworker according to his own statement is about Rs. 15 per month while the labourers are paid about Rs. 10 each per month. The fall in the income of these artisans is attributed to change in fashion which has affected the demand.

The *Chalak* Industry.

20. A few years back there were reported to be nearly160 concerns at Surat manufacturing *chalak*. But as the wearing of gold-thread-embroidered caps and cloth is now getting increasingly out of fashion, their number has gone down to about 50. About 500 people are said

to be engaged in this industry. Demand for *chalak* is brisk during the marriage season. The investigator interviewed a *karkhandar* whose equipment consists of a ½ H. P. machine for pressing the wire, and some locally-made tools and appliances. The total equipment is reported to be worth about Rs. 360. The production is to order, the *karkhandar* being afraid of producing for stock as *chalak* loses its lustre if stocked for a few months. The net income of the *karkhandar* is estimated to be Rs. 80 a month. The *karkhandar* states that there is much internal competition and wants Government to start an Association of *chalak* producers for regulating prices. He also complains about the irregularity and the idle ways of the labourers engaged by him.

Kasab Industry.

21. Surat is a very important centre of the gold thread *kasab* industry. There are many *karkhandars*, most of whom are also dealers. In addition to this, there are also a few independent workers. During the last few years there has been a change in the organisation of the industry. Formerly the artisans had their own tools and worked at home. Now they have become mere workers on wages for the *karkhandars*. The investigator interviewed two *karkhandars*. One of them employs 40 to 50 workers. The raw materials used are silver gold and silk yarn. All these are locally purchased. The instrument and appliances of the *karkhana* are worth about Rs. 9,000. The *karkhandar* reports that he is making changes in the patterns as often as he can. He would, however, like to be supplied from time to time information regarding changes in borders. The net profit of the *karkhandar* according to his own statement is about Rs. 1,500 a year. The other *karkhandar* earns about Rs. 2,000 a year. Both of them are of opinion that unity amongst the *kasab* weavers can bring about a substantial improvement in the industry.

Silk Weaving (handlooms).

22. At Gopipura in Surat, 175 handlooms are engaged in weaving silk, and they give employment to about 300 workers. The investigator interviewed one of these silk weavers. He has two looms and a brother of his is working on the other loom. With 2¼ seers of silk provided by a merchant, the weaver prepares in one and a half months 5 pieces of shirting, each measuring 14 yards × 24". The wage for this work is at present Rs. 20. About ten years back he stated that it was Rs. 50. Moreover, formerly he could get advance to the extent of even Rs. 1,000. Now as the industry has ceased to pay, nobody gives him any advance. His monthly income is about Rs. 14. His brother also gets about the same income. The investigator reports that these weavers are too illiterate to suggest remedies for their improvement. All that they could state was, that Government should come to their aid.

Kinkhab Production.

23. *Kinkhab*, the gold-thread woven cloth, is considered to be the finest product of the handloom in India; and Surat is an important centre of the *kinkhab* industry. The industry is, however, reported to be in a decayed condition. When Mr. Fernandes reported in 1927 there were said to be 300 workers in this industry. He also reported that there were many who knew this art but had given it up for other occupations in order to save themselves from starvation. The investigator's report shows that the industry is now in a still more depressed condition. He interviewed four weavers of *kinkhab* at Surat. Three of them are independent workers and one is a big *karkhandar* employing about 50 workers. It seems that the industry at Surat is generally carried on, on a family basis. The independent workers work on pit looms worth about Rs. 35 each, while the equipment of the *karkhandar* consists of different machines and is worth about Rs. 10,000. The raw materials of the industry are mercerised and silk yarn and silver and gold thread. Most of the poorer workers, however, only use mercerised yarn, artificial silk yarn and *kasab chikta*. As the raw materials are costly, some of the weavers have to borrow at heavy rates of interests. Moreover, due to poverty, purchases of raw materials have to be made on a retail basis and higher prices are generally charged by the traders. The *kinkhab* weavers request Government to arrange for the supply of their raw materials at cheaper rates by means of a co-operative purchase society.

24. For preparing a piece of *kinkhab* (5 yards × 27″), generally 10 days are required for an independent worker. This piece fetches about Rs. 12. But the prices vary according to quality. On an average an independent worker weaves *kinkhab* worth about Rs. 500 a year. The big *karkhandar* who was interviewed, however, produces better quality of *kinkhabs* and his production is worth Rs. 60,000 a year. The independent workers sell their products mostly to local dealers. These latter send them to distant countries like Iraq, Aden, Egypt, etc. Burma also is an important market for Surat *kinkhabs*. But it is reported that latterly looms for preparing this cloth have been installed in Burma itself and in a few years it is expected that Burma will cease to import any *kinkhabs*. The independent weavers desire direct contact with foreign customers to eliminate their dependence on the local dealers. They state that if their wares are properly advertised they would have a wider market. It is reported that these artisans at present cannot earn more than Rs. 12 per family per month. Moreover they are also losing their artistic skill. Now-a-days in most *kinkhabs*, genuine gold and silver thread is rarely used and the *kinkhabs* for which Surat was once famous are reported to be deteriorating into ordinary handloom cloth. The investigator reports that the foreign imitation *kinkhabs* have dealt a severe blow to the local industry. The Surat products have also deteriorated by the use of artificial silk in place of real silk. Mr. Fernandes has stated in his Report that the present day *kinkhabs* are not so pretty as those made 50 years back,

and ascribes this to the substitution of aniline dyes for the old indigenous vegetable dyes. These artisans are reported to have also been affected in another way. A good number of them used to prepare silk brocades. Surat was known for this artistic product. A piece of silk brocade (3′ × 27″) used to fetch about Rs. 3. Now Japan is dumping the markets with inferior brocade cloth costing about 8 annas. The result has been the almost complete extinction of the Surat brocade industry and it is urged that Government should severely restrict the import of Japanese brocade.

Handloom Weaving (cotton *sarees*).

25. *Sarees* of different designs are woven at Bardoli, Mandvi, and Chikhli. The number of looms at these centres is estimated to be 45 and 33 respectively. The investigator interviewed an independent weaver at Bardoli and an outworker at Chikhli. The former uses cotton yarn of 30s and 40s, and artificial silk yarn in his production. He works on the old fashioned loom and for weaving a *saree* (5 yards × 44″) he takes 3 days. It is generally sold to local merchants at Rs. 3-4-0. During the rainy season he stocks his production. The investigator reports that the designs of this weaver are very old-fashioned. His monthly income is about Rs. 8. This is the income of the whole family.

26. The Taiwad outworker works on a fly-shuttle for a local merchant. He prepares a *saree* (5 yards × 45″) in a day. His wife does some of the preparatory processes.

The weavers complain bitterly against the powerloom *karkhandars*. They want Government to restrict the production of *sarees* on power-looms. That is stated to be the only way of solving their troubles. They also desire that they should be taught the production of new designs.

Woollen Blanket Weaving.

27. According to the investigator there are about 20 woollen blanket weavers at Khapariya. These weavers are also agriculturists and a few of them get grain sufficient for the year from their work during the rainy season. One of the weavers interviewed by the investigator purchases his supply of wool either at Surat or at Amalsad. He has to incur heavy expenditure on the transport of this wool. With the help of his old-fashioned loom he prepares a blanket (2¼ yards × ¾ yard) in about 3 days. Thus about 10 such blankets are pepared by him in a month. These are sold locally for Rs. 1-6-0 to Rs. 1-8-0 each. During the rainy season the artisans work on their fields. The investigator reports that the weavers are eking out a hand to mouth existence. The wool weavers want that Government should start a co-operative purchase and sale society which will give them raw wool at low rates and sell their finished products at higher prices. They also want better quality wool. Further they wish to be trained in the production of new designs on the latest types of looms. They also urge that the use of mill woven rugs and blankets should be discouraged.

Cloth Buttons Industry.

28. This is one of the small industries at Vapi. The investigator was informed that a few years back about 50 to 60 women were engaged in it. But to-day there are about 30. The investigator interviewed a worker who spends about 4 hours daily on this industry. She uses old rags for preparing the buttons. The only item of expenditure is thread and for preparing 300 buttons, thread of an anna is reported to be required. The buttons are sold to local tailors and cloth merchants at the rate of 16 for an anna. During the rainy season the production is for stock. The investigator was informed that some years back these buttons fetched double the present price. The margin of remuneration is now fast declining and machine-made cheap buttons are being imported from Japan. The button-makers are of opinion that their industry can be developed only if sufficient publicity is given to their products, and people are encouraged to buy *swadeshi* goods.

Bobbin Making.

29. An interesting memorandum was received from a *karkhandar* at Navsari who is preparing bobbins and wooden articles needed in cotton mills and ginning factories. He employs nearly 100 workers on a contract basis. The machinery used consists of an oil engine, a bent saw, an automatic turning lathe, etc. Three-fourths of the wood utilised by him is imported from the United States of America, Germany and Canada, and only one-fourth is Indian. The products are mostly wooden parts required in the cotton textile mills, and bobbins form a small part of the manufacture. The *karkhandar* states that the business has ceased to be profitable. In the first place, the heavy customs duties on imported wood, are said to penalise the local industry *vis-a-vis* foreign producers. Secondly, the freight charges on the carriage of the raw material from the port to the interior are reported to be unduly burdensome. Electric charges are also said to be very high at Navsari, so much so that the *karkhandar* had to go in for an oil engine. But latterly the price of crude oil is stated to be continuously increasing. The result of these factors has been high cost of production and inability to compete with Japanese products.

The Engineering Industry.

30. The investigator visited an engineering establishment at Surat. Here about 28 persons are employed on monthly wages. The equipment consists of milling, drilling, planing and slotting machines and a foundry, and is estimated to be worth about Rs. 30,000. It is mostly foreign. The raw materials used are scrap and cast iron, hard coke, gun metal, sand, etc. From these, crude oil engines, sugar-cane crushers, electric pumping sets, etc., are manufactured. The sales are both for cash and on the hire purchase system. The designs of the machines are somewhat old fashioned. It is stated that new designs cannot be executed without conducting very costly experiments. The products are marketed

throughout the Province. The owner, however, hopes to tap the other Provinces as well. The *karkhana* also undertakes repair work of ginning machinery during the ginning season.

31. It is stated that for the rapid development of the industry, protection against foreign imports is essential for some time. It is also stated that as banks do not finance industrial concerns at sufficiently low rates of interest, Government should start an industrial bank for the purpose. Lastly, it is urged that Indian products should be given wide publicity.

Nut Crackers and Penknives.

32. Olpad was once well known for its nut-crackers and penknives. It is stated that some years back about 7 blacksmiths were manufacturing these products. At present there is only one artisan who carries on this industry with the assistance of his brother. His equipment is worth about Rs. 100. He buys his raw materials from local merchants. His annual production is about 400 nut-crackers and 250 penknives. The usual price of a nut-cracker is 6 annas and that of a penknife 8 annas. The market for the product is mostly local. At times, however, orders are received from other parts of Gujarat. The income of each worker is about Rs. 15 per month. During the agricultural season they earn Rs. 150 by repairing agricultural implements. The main reason for the decay of this industry is reported to be the severe competition from cheap but well-polished articles imported from Japan and Germany. It is urged that some restriction should be imposed on such imports. It is also suggested that Government should depute some persons to study very carefully the technique of production followed in Japan and Germany and train up these artisans, who should be given Government patronage.

Bell-metal Ware Industry.

33. Pardi is the only centre in Gujarat where bell-metal ware is manufactured on a large scale. The investigator interviewed the *karkhandar* of the only factory here. The *karkhandar* is assisted by three members of his family and 10 workers. The raw materials of the industry consist of scrap bell-metal, tin and copper. About Rs. 300 are invested in the equipment of the factory and the yearly output is worth about Rs. 5,500. Different kinds of utensils like *chalia, vadka, thali,* are produced and are sold to local dealers at an average rate of Rs. 45 per maund. After paying all the expenses, the *karkhandar* and his family are stated to be getting about Rs. 1,000 per annum. The *karkhana* works throughout the year. The *karkhandar* complains about the competition from the Bhavnagar producers. Due to this competition his production is reported to have come down from 160 maunds to 120 maunds per year. He wants Government to encourage his industry by using bell-metal utensils in jails. Further, he wants technical advice regarding the latest processes of melting the metals,

Gold Ornaments.

34. The investigator reports that there are many shops of goldsmiths at Surat. He interviewed one of these goldsmiths who is assisted by five family members and three outsiders. Due to want of finance he works mostly for orders. People bring to him gold, silver, jewels, etc. and he prepares the specified ornaments. His instruments are ordinary and are reported to have cost him about Rs. 300. He, however, does not know the art of preparing dies and so the designs now require to be carved by hand. If he can introduce dies he can save both time and raw materials. He, therefore, wants Government to train his family members in the art of preparing dies. He also wants to be taught the art of polishing ornaments with the aid of machines, as at present he has to take his ornaments to one of the 6 or 7 polishing shops for giving them the necessary polish, and pay exorbitant charges. Lastly, he wants to be provided with finance at cheap rates so that he can produce ornaments directly for the market. The investigator reports that these artisans get about Rs. 15 a month.

Sandalwood Carving.

35. Very artistic sandalwood carving is done at Surat. When Mr. Fernandes made his report in 1927 there were said to be 39 houses engaged in this industry. Since then the industry has declined considerably. The investigator interviewed an artisan who was assisted by his brother. He imports ebony, redwood, and sometimes reindeer horn from Bombay. Sandalwood, yellow wood and teak wood are locally obtained. As the redwood is very difficult to obtain now in Bombay, they have sometimes to do away with the redwood designs. The tools employed by these artisans are primitive and consist of many shapes and sizes. The artisan interviewed was not aware of anybody using improved instruments.

36. The method of doing inlaid work is very interesting. First of all long bits of lead, ivory, black or red wood are cut. They are then bound together with glue in different shapes. When dry, these are cut into thin slices which are formed into triangles, squares, hexagones, etc. Then they are placed in such a manner as to form intricate designs. These are again outlined by lines of lead, ivory and black or redwood. Sometimes a carved sandalwood design is placed in the centre of top of the box and these inlaid designs are utilised for outer sides. The artisan interviewed, stated that last year he and his brother prepared sandalwood and ivory boxes worth about Rs. 1,500. These were sold to Delhi and Bombay merchants and both the brothers got about Rs. 500 for themselves.

37. The artisans think that if their products are properly advertised they can get enough work throughout the year. At present Bombay and Delhi are the only marketing centres for their products. The dealers at these places are reported to buy at low-rates and to sell to

outsiders at unusually high prices. The artisans consider that if Government can undertake the sale of their products, they will save much of this profit. Wide publicity is also considered necessary for developing the sales of the Surat products. They also want to be supplied with raw materials at cheap rates. The investigator reports that the artistic skill of the carvers and inlayers has deteriorated in recent times. Moreover, the designs are said to be old-fashioned. The artisans suggest that their children should be trained in modern designs.

Pulse-splitting Industry.

38. The investigator visited Degam where there are 3 independent workers engaged in *dal* making. Each of them employs about 5 to 6 labourers under him. One of these workers who was interviewed, owns two hand-driven mills worth about Rs. 100. *Tur* pulse is purchased from December to May from the neighbouring villages of Vyara and Navapura. *Khursani* (Niger seed) oil is used in the preparatory processes. The finished product i.e. the split *dal* is marketed locally. The worker stated that last year he purchased nearly 1,500 maunds of *tur* pulse costing about Rs. 3,400, and obtained, Rs. 4,000 from the sale of *tur-dal*. Formerly these workers were reported to be selling their products in the Bombay market but now machine-made *tur-dal* has completely ousted them from that market. The worker suggested that Government should not allow power to be utilised in the preparation of *tur-dal*.

The Oil-seed Crushing Industry.

39. Surat and Bulsar are important centres of the oil-seeds crushing industry. It is estimated that about 250 persons are engaged in it at the former place while at Bulsar there are reported to be 14 *ghanis* working. The investigator reports that there were nearly 60 *ghanis* at Bulsar, only a few years back. He interviewed two *telis* one at each of these places. The *ghani* commonly used at Surat is estimated to cost about Rs. 75. It is mostly worked with bullocks. The *telis* there, maintain that this *ghani* is better than most other *ghanis* used in other places. The *teli* interviewed at Surat crushes sesame (*til*) seed while the one interviewed at Bulsar presses *kharsani* seeds. Normally the oil and cake are marketed locally and in the surrounding villages. The Surat *teli* estimated his net income at Rs. 25 per month while the Bulsar *teli* stated that he did not get more than Rs. 15 per month.

40. Both the *telis* complain about the competition of the oil mills. They state that due to the activities of these mills they do not get sufficient work to maintain themselves. They, therefore, want Government to prohibit the sale of mill-crushed oil for edible purposes. They, however, have no objection if it is used for preparing soaps and other purposes.

Fishing.

41. The Surat district has a good coast line and a substantial section of the population is reported to be non-vegetarian. Conditions are thus favourable for the improvement of the fishing industry, which is carried on to a limited extent at Olpad, Jalalpore, Bulsar and Kolak. The investigator studied the conditions of the industry at Kolak and Bulsar. The number of fishermen at Kolak and Bulsar is reported to be 300 and 20 respectively. At both centres nets are prepared by the fishermen during the rainy season from hemp purchased locally. The Kolak fishermen also carry on agriculture. Fishing at Kolak is mostly done on a co-operative basis. There are 29 fishing boats at this centre and generally 10 persons work on a boat. The boats are somewhat costly and are estimated to cost about Rs. 1,000 each. After the day's toil, the catch is equally distributed among the crew and the owner of the boat gets an additional share. The Bulsar *koli*, on the other hand, works by himself. His small boat, worth about Rs. 10, is usually carved out of the stem of a tree.

42. The nature of the catch varies according to the season, which starts more or less simultaneously at all fishing centres in the Bombay Province. From October to December the catches of *bombils* (Bombay duck) are heaviest. From February to May, *Ghol* (*Sciaena sina and S. diacanthus*) and *Dara* (*Polynemus indicus*) are predominant among the fish caught. The fish caught at Kolak is partly cured and partly sold in the fresh condition. Some part of the catch is sent to nearby areas and to Bulsar. The amount caught at the latter place is barely sufficient to meet the local demand. Fresh fish is generally sold by the womenfolk. The cured fish finds a ready sale at Nasik, Broach and Ahmedabad. The prices obtained last year for this fish varied from Rs. 12 to Rs. 14 per 20 in the case of *Ghols* and from Rs. 18 to Rs. 20 in the case of *Dara*. The maws gathered from the larger fish are sold locally to traders at the rate of Rs. 5/8 for 20 maws. They are exported to England and France, where the product is utilised for the manufacture of isinglass. The investigator estimates the monthly income of the *kolis* at Kolak and Bulsar at Rs. 15 and Rs. 3 respectively during the fishing season.

43. The Kolak fishermen complain bitterly about the heavy charges they have to pay for salt used in curing fish. It is reported that although Government supplies salt at concession rates, the whole supply is monopolised by a few middlemen who charge double the rate. The fishermen, therefore, want a fish curing yard to be established in their centre. They also want to be put into direct touch with the big trader of fish maws from Bombay. This, they believe, would enable them to get more remunerative rates for the maws than at present. A minor grievance of the Bulsar fishermen is the increase in the municipal tax on the sale of fresh fish. Some years back the tax was stated to be only 6 pies a day while to-day it has been increased to one anna. The Bulsar fishermen maintain that even this small increase is too much for people like them and is not justified in view of their paltry income of Rs. 3 per month.

Tanning.

44. The investigator interviewed a few tanners at Sunkesh in Pardi *mahal* and at Ovada in Bulsar taluka. According to him there are about 38 houses of tanners at the former place and 15 at the latter. Generally speaking, about Rs. 25 are required for the equipment of a tanner. The artisan interviewed at Ovada uses about 50 maunds of raw hides per year. He informed the investigator that for finishing one maund of raw hides, he uses 5 seers of lime, 2½ seers of salt, 2 maunds of *babul* bark and about 10 annas worth of *harda*. The raw materials are locally purchased and the tanning is done by the crude bag process. The finished hide is sold locally and to the shoe-makers of the surrounding villages. On an average a tanner gets an income of about Rs. 7 per month. The investigator was informed that about 10 to 15 years back there was much work to be done and the net income was as high as Rs. 25 per month and at that time *mochies* from Surat, Nandurbar, Broach, etc., used to come to the places for leather.

45. The deterioration in the condition of the tanners is stated to be partly due to the use of American chrome splits for manufacturing washers. Formerly there was a steady demand for the local product for this purpose. The tanners also complain against the imports of cheap machine made shoes which have reduced considerably the prices of their leather. The poorer classes of *mochis* are at present their chief buyers and most of them cannot afford to pay cash. The tanners request Government to: (1) restrict the imports of foreign boots and shoes, (2) persuade the manufacturers of washers, etc., to use their leather, (3) teach them improved methods of tanning and (4) market their products at economic rates.

Cart-Making.

46. Talao Chora in Chikhli *mahal* is an important centre of the cart-making industry. The investigator was informed that some years back there were at this place about 35 *karkhanas* employing nearly 125 artisans in the industry. Today there are only 11 *karkhanas* providing work for about 37 workers. The total cart production of Talao Chora is estimated to be worth about Rs. 13,000 per annum. The investigator interviewed an independent artisan. He is assisted by his brother and occasionally an outsider who is paid a daily wage of Re. 1. His equipment consists of simple tools worth about Rs. 250. The raw materials of the industry are wood, paints, nails, iron wheels, etc., and are purchased partly locally and partly from outside. On an verage he prepares about 16 carts a year. About 10 years back he was preparing nearly 22 carts, and the margin of profits was also high in those days. At present the price of a cart varies from Rs. 65 to Rs. 100. It is estimated that after deducting all expenses, both the brothers together get about Rs. 30 per month, including income from repair work. The rainy season is a very slack time for this industry. According to the artisan the rapid decay of the industry is due to severe competition from bus traffic. He, therefore, requests Government to put restrictions on bus traffic so that buses may carry only passengers but not goods.

Basket-Making.

47. The investigator reports that there are about 125 bamboo workers at Surat and about 28 at Bulsar. He interviewed 3 artisans at Surat and one at Bulsar. Almost all of them are helped by their family members. The bamboos are locally purchased at the rate of about Rs. 14 per hundred. On an average, 5 baskets, each worth about Re. 0-2-6, can be prepared from one bamboo in a day. A family earns about Rs. 15 to Rs. 18 a month. In the rainy season the demand is very slack and the condition of the bamboo workers is stated to be very bad.

48. The artisans complain of competition from workers in the Dahanu taluka where the bamboos are cheaper due to the nearness of the forests and the railway station. They also complain that their own municipalities prefer outside products and do not patronise the local artisans. Moreover, the increasing use of tin and iron baskets and the use of gunny bags for exporting potatoes, onions, etc., has very much affected their industry. They desire that Government should (1) lower the prices of bamboos and (2) arrange to sell their products so as to ensure them a wage of at least Rs. 20 per month.

Coir Rope Making.

49. According to the investigator there are about 80 women engaged in rope-making at Surat and it is estimated that about Rs. 3,000 worth of ropes are produced in a year at this centre. The process of preparing ropes by hand is very simple. The cocoanut-husks are first soaked in water for about two days. They are then hammered and the outer coverings are removed. The fibres are then separated and dried. They are then twisted by hand and ropes are prepared. For preparing a rope 30 feet in length at least two days are required for twisting. The cocoanut-husks are locally purchased at the rate of Rs. 4 per thousand. The ropes when prepared, are sold to local dealers at the rate of 3 annas to 4 annas for a rope of 30 feet length. The income of a worker hardly exceeds Rs. 3 per month. It is stated that this income would appreciably increase if the coir workers are supplied with twisting machines like those in use in Travancore and Cochin. The artisans also want marketing arrangements for their goods. They think that if such arrangements are made, they would get more income.

Baj-Making.

50. It is reported that about 60 families at Vapi are engaged in preparing *baj* or *patravali* (leaf-plate). Their annual production is estimated at Rs. 2,000. Some years ago when caste dinners were frequent, there was a big demand for *baj*. These caste dinners are now not so frequent and the demand for *baj* is consequently much reduced.

51. The investigator interviewed one of the workers engaged in this industry. He is doing this business in his spare hours. His main industry is agriculture from which he gets about Rs. 100 a year. This artisan brings a cart load of leaves from the forests in the Dahanu taluka during April and May and prepares *baj* in the rainy season. For one cart load of leaves he pays Rs. 2–8–0 and the cart fare comes to about Rs. 7–0–0. Out of a cart load of leaves nearly 20,000 *patravalis* can be prepared. They are sold to local merchants at an average rate of Rs. 1½ per thousand. Formerly the rate was Rs. 3 per thousand. *Baj*-making thus yields him a total income of about Rs. 20. He says that this enables him to get some cash for his household purposes. He, however, wants to establish direct contact with outside merchants so that he can realise better prices for his product. The demand for *baj* is stated to be more brisk in the marriage season. Generally speaking, this industry is mostly carried on by the womenfolk during their spare hours.

Furniture.

52. There are 5 or 6 furniture makers and a few coach makers at Surat. Surat furniture is reported to be very artistic and Surat coaches are famous throughout Gujarat. But at present these furniture dealers are only meeting the local demand and the demand for coaches is said to be daily dwindling.

Mill Accessories.

53. There are 5 or 6 concerns at Surat manufacturing mill accessories, and they are in a tolerably good condition. Besides these, there are 3 or 4 concerns manufacturing steel furniture, safes, etc., at Surat. They mostly meet the local demand.

OTHER INDUSTRIES.

Gur-making.

54. There are 5 *karkhandars* who prepare *gur* from sugarcane in Surat and Bulsar. The sugarcane is locally grown and liquid *gur* is prepared by the old crude methods. The market is local but the *gur* makers complain of the competition from solid *gur* imported from outside. They want Government to encourage their industry.

Sweetmeats.

55. Surat is known for its sweetmeat preparations. These are prepared in large quantities and sent to Bombay and many other palces.

Preparation of Broom-Sticks.

56. There are *khajjuri* (palm) trees in abundance in the Surat district. The stems and leaves of the trees are used in preparing broom-sticks. Villages like Madhi, Songadh, etc., are exporting these broom-sticks in waggon loads to Ahmedabad every year.

Possibilities of New Industries.

57. The *akik* stones which are found in plenty at Roswad and Tadkeshwar are at present sent to Cambay where they are polished and turned into buttons, ear-rings, etc. It should be possible to utilise them in the district itself for the manufacture of buttons, etc., on a cottage industry basis. The artistic skill of the artisans in the district suggests the revival of the lacquer-ware industry. The preparation of *gur* from *khajjuri* trees was also suggested, as a new industry that could be developed on cottage basis. The district has a large area under fruits and this should provide considerable scope for the canning of mango and other fruits. Similarly, castor seed is grown in considerable quantities in the district and it has been suggested that a castor-oil refining plant can be started with advantage, at Surat. It has also been suggested that as the silk cloth manufactured at Surat, is at present sent to Bombay for dyeing, a plant for dyeing and printing can be established at Surat itself. Another new industry that suggests itself is the manufacture of cement from limestone and clay found in considerable quantities in the district. It is reported that recently the right to excavate the limestone at Tadkeshwar has been leased to a cement-manufacturing company.

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Volume II

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PREFATORY NOTE

Volume II of the Report contains notes on the economy and industries of the various districts of the Province and of the City of Bombay. These notes have been drafted by Dr. V. K. R. V. Rao and are based upon the reports collected by the Committee's investigators, the records of their interviews with the artisans and traders and such other information as was available to the Committee in the form of published documents and memoranda submitted by officials and non-officials; the notes were discussed by the Committee and they resolved that the same be published as Volume II of the Report.

It must be made clear that these notes are not intended to be recommendatory to Government, nor do the information and suggestions contained therein represent the views either of Dr. Rao or of the other members of the Committee. Such views as these notes contain are in most cases the views of the artisans and traders interviewed by the investigators and in some cases they also include the views of the investigators themselves. The Committee, therefore, do not hold themselves responsible for any of the views expressed in this Volume.

The Committee are aware that the data contained in these notes is not always adequate and in some cases it is possible that some inaccuracies of fact might have crept into these notes. After all, it must be remembered that the investigators on whose returns these notes are mainly based, can not have spent on an average more than 15 days in a district and their main function was to record views. They have faithfully done that and if there are any inaccuracies or erroneous beliefs or undue expectations about the industrial possibilities, they merely represent part of the accepted ideas of those who are engaged in industrial occupations in the districts. The Committee were anxious that data should be collected regarding the number of those engaged in different industries and with this end in view suggested to Government that a sample industrial census should be taken of the Province. But Government did not see their way to accept the scheme submitted by the Committee with the result that it has not been possible for the Committee to collect statistical data regarding the condition of small scale and cottage industries of the Province. With the limited staff and funds at their disposal, the Committee had to restrict themselves to ascertaining the

experience, views and difficulties of those who are engaged in small scale and cottage industries of the Province; and as persons engaged in small scale and cottage industries are scattered, unorganised, and spread over the whole of the Province, the Committee had to appoint investigators for the purpose of interviewing a few persons in each district who are engaged in different cottage and small-scale industries. The industrial side of the notes, which follow, merely sums up the information collected by the investigators from the artisans and traders whom they interviewed. The Committee nevertheless have to recommend the publication of this material as Volume II of their Report in order that public interest may be roused in the economic and industrial conditions of the Province and these reports should be made the starting point for further and more elaborate investigation. They hope that Government will follow this up with a sample industrial census of the Province; if this is done, these notes together with the results yielded by such a census will constitute a valuable store-house of information for those who are engaged in the task of planning the industrial future of the Province.

PURSHOTAMDAS THAKURDAS,

May 3, 1940. Chairman.

EXPLANATORY NOTE

These Notes on the Economy and Industries of the various districts in the Province and of the Bombay City, comprising Volume II of the Report of the Bombay Economic and Industrial Survey Committee, were submitted to Government by the Committee in May 1940. The Committee expressed the view that these Notes should be printed for general information in order that public interest might be roused in the economic and industrial conditions of the Province. The Notes as received by Government needed, however, revision and re-shaping before they could be published. Government, therefore, appointed with effect from 3rd January 1941 Mr. P. S. Nadkarni of the Finance Department, who had worked as the Assistant Secretary of the Committee, to carry out this work. Mr. Nadkarni worked under the general supervision of the Director of Industries and in the preliminary stages in consultation with the Chairman and the Secretary of the Committee. Beyond putting into shape, and editing the Notes for purposes of publication, no alterations have been made in the drafts as originally submitted to Government by the Committee.

P. B. ADVANI,
Director of Industries.

March 1941.

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THANA.

Position and Area.

The district of Thana, lies between 18° 53′ and 20° 22′ north latitude and 72° 39′ and 73° 48′ east longitude and covers an area of 3,422 square miles. It is bounded on the north by the Portuguese Territory or Daman and by Surat district; on the east by the Western Ghats; on the south by Kolaba district and on the west by the Arabian Sea.

Physical Features.

2. The district consists of a distinct strip of lowland intersected by hilly tracts, rising to elevations varying from 100 to 2,500 feet. Towards the east and north-east the country is elevated, covered with trees but scantily cultivated. Near the coast the land is low, and where free from inundation, fertile. Facilities for fishing also exist on a large scale and the villages are exceedingly populous. In the north-east, however, the hills are covered with forest, and the valleys but partially cultivated; here the villages are seldom more than scattered hamlets of huts, and the population consists mainly of uncivilised aboriginal tribes.

Climate and Rainfall.

3. For fully half the year the climate is exceedingly moist and the district is generally unhealthy. There are no great variations in temperature during the different seasons of the year, the air being cooled by sea winds during the hot months and in the south-west monsoon. The average rainfall is about 98 inches and is entirely derived from the south-west monsoon. Frequently continuous rain causes damage to the embankments of the fields and the seed-beds of rice, washing away transplanted crops, and otherwise doing much mischief.

Population.

4. According to the Census of 1931, the district has a population of 836,625 persons of whom 756,532 live in rural areas consisting of 1,547 villages, while the remaining 80,093 are resident in urban areas, consisting of five towns. The following are the important towns in the district:—

Towns.	Population.
Kalyan	26,291
Thana	21,816
Bhivandi	15,619
Bassein	12,689

It will be noticed that the proportion of urban population to the total population is only 9·5 per cent., which is considerably below not only the provincial average (23·3 per cent.) but even the All-India average (10·9 per cent.), thus demonstrating the essentially rural character of this district.

According to the Census returns for the same year, the total number of principal workers in the district is 345,284, of whom 235,123 are males. The occupational distribution of this number is given below :—

Exploitation of animals and vegetation ..	278,342
Exploitation of minerals	3,372
Industry	20,657
Transport	6,315
Trade	7,625
Public Force and Administration	3,101
Professions and Liberal Arts	2,707
Living on their income	406
Domestic service	7,300
Insufficiently described	13,141
Unproductive	2,318
Total ..	345,284

The industrially occupied proportion of the total principal workers is only 6 per cent. But it should be pointed out that the 278,342 people shown as engaged in the exploitation of animals and vegetation are not all employed in agriculture. That figure can be further analysed into the following sub-divisions :—

Cultivation	250,207
Forestry	14,802
Stock raising	6,946
Fishing, etc.	6,387
Total ..	278,342

Similarly the 3,372 persons shown under "exploitation of minerals" are all employed in salt making. It thus appears that forest industries, fishing, cattle breeding and salt making are important non-agricultural occupations of the district, and these though not falling within the Census definition of "Industry", nevertheless fall within the scope of this survey.

Health and Medical Facilities.

5. Some indication of the health conditions in the district is provided by its vital statistics. The mean ratio of births per thousand for the five years ending 1937 was 33·13 and that for deaths was 21·13. It will be observed that the birth rate is considerably lower than the corresponding provincial rate (40·11), but the survival rate for Thana is nearly the same as the provincial survival rate (12·86).

The district contains two hospitals and fifteen dispensaries. Of the two hospitals one is maintained by Government and is in the town of Thana, and the other is maintained by a mission at Dahanu. The District Local Board maintains 11 dispensaries, the remaining four being maintained by municipalities. There are about 191 doctors in the district of whom 27 are practising in Thana town. The proportion of doctors to the population in rural areas comes to one for every 6,000 persons.

Literacy and Educational Facilities.

6. According to the Census of 1931, 65,960 persons are returned as literate; thus constituting a literacy percentage of 7·8 for the district. It is really a little surprising that inspite of superior economic conditions and vicinity to Bombay and its suburbs, this district should show such a low literacy percentage. But the explanation probably lies in the fact that the north-east part of the district is woody, isolated and largely inhabited by wild tribes.

The educational facilities in the district are summed up in the following statement for the year 1937–38:—

Description.	Number of Institutions.	Number of pupils.
Primary Schools	581	47,119
Secondary (including lower secondary) Schools ..	28	4,477
Commercial and Industrial Schools	6	379

Of the 1,547 villages in the district, 1,073 villages have no schools.

Transport Facilities.

7. The district is traversed in all directions by good roads, and the total mileage of roads maintained by Government and local authorities is 1,123 of which 875 miles consist of metalled and 248 miles of unmetalled roads. In the hot weather the "kaccha" cart tracks cut up badly and in the rains traffic almost ceases even on the main roads. Made roads cross the Sahyadris by the Shir Ghat and the Thal Ghat, while

the Nana Ghat track is also important. The B. B. & C. I. Railway runs along the coast while the G. I. P. line divides at Kalyan into two branches, the one running to Nasik by the Thal Ghat and the other to Poona by the Bhor Ghat.

SURVEY OF RESOURCES: AGRICULTURAL AND LIVESTOCK.

8. The district has a total area of 2,197,061 acres of which only 642,297 acres constitute the gross cropped area. Forests absorb 835,483 acres, while other uncultivable lands come to 292,147 acres. 382,636 acres constitute current fallows, while cultivable waste i.e., the area which is theoretically available for extension of cultivation covers 52,489 acres.

The following table gives details of the classification by crops of the cultivated area :—

	1937-38.
	Acres.
Rice	336,562
Wheat	105
Jowari	762
Ragi	44,470
Maize	26
Gram	1,510
Other food grains including pulses	43,068
Sesame (*Til*)	1,087
Groundnuts	13
Cocoanut	313
Castor seed	268
Other oil-seeds	4,622
Condiments and spices	1,762
Sugarcane	140
Fibres	1,614
Drugs and narcotics	600
Fodder crops	198,508
Fruits and vegetables	6,678
Miscellaneous non-food crops	189
Total ..	642,297

Though fruits and vegetables account for an area of less than 7,000 acres, they form a very important part of the economy of the coastal talukas of Bassein, Palghar, Umbergaon and Dahanu. At Bassein more than 2,000 acres are under fruit crops. The most important

fruit crop is plantain, which is grown over 2,600 acres, the taluka of Bassein alone accounting for nearly 1,900 acres. More details under the head of "Fruits and Vegetables" were obtained from the Department of Agriculture for the year 1938–39; and in view of the importance of these money crops, these details are summarised below:—

Vegetables.	1938-39.
Vegetables—	Acres.
Potatoes	44
Sweet potatoes	270
Radish (*mula*)	71
Onions	589
Others	85
	1,059
Green vegetables—	
Tomato	30
Fenugreek (*methi*)	19
Edible Hibiscus (*bhendi*)	65
Musk Melon	58
Water Melon	221
Others	1,566
	1,959
Fruits—	
Plantains	2,602
Mango	1,114
Guava	16
Kaju	55
Others	251
	4,038
Total, Fruits and Vegetables ..	7,056

There are in addition betel vines which are grown very extensively in the Bassein taluka.

Another noticeable feature in the agricultural economy of the district is the very large area under fodder crops; in fact, fodder crops with their 198,508 acres come only next to rice with its 336,562 acres. This big area under fodder crops is accounted for by the flourishing trade in grass and hay which is centralised at Palghar. According to the Cattle Census taken in 1934–35 the details of live-stock in the district are as follows:—

Bulls and Bullocks (breeding, working and young stock)	223,581
Cows (breeding, working and young stock) ..	193,828
Bull Buffaloes (breeding, working and young stock).	41,950
Cow Buffaloes (breeding, working and young stock).	50,544
Sheep and Goats	69,215
Horses and Ponies	2,148
Donkeys	382

Of these, 158,056 are milch cattle consisting of 122,594 cows and 35,462 cow-buffaloes.

Survey of Resources—Minerals.

9. Thana is not very rich in workable minerals. The laterite which caps many of the higher hills, such as Prabul and Mahuli, bears trace of iron, and where charcoal has been burnt, lumps of clay resembling iron slag may be found. The water in many springs also shows signs of iron. But iron ore is nowhere to be found in paying quantities. Another mineral of which there are traces is sulphur, found in the hot springs at ~~Vajrabai~~, in Bhiwandi. Recently, the investigations of the Industries Department have lead to the discovery of bauxite deposits on the Tungar Hill. Bauxite is an important raw material for the aluminium industry and deposits found in the Tungar Hill are reported to be of good quality. Trap stone is found all over the district, except in its coastal portions. It is admirably suited and largely used for buildings. ~~There is no~~ Clay suitable for ~~making either~~ good pottery ~~or good bricks~~ is available in Basai Taluka. The ordinary wheel tiles, flower pots and inferior bricks made in the district, are from rice-field clay.

Survey of Resources—Forests.

10. As has already been pointed out, Thana is a very important forest district. The area under forests is 835,483 acres or nearly 40 per cent. of the total area of the district. Most of the area consists of good medium size deciduous forest, in which teak and *ain* (*Terminalia tomentosa*) form the common species. There are also some other good species like the *khair* (*Acacia catechu*) and *Sisum* (*Delbergia latifolia*). Good bamboes are found in many places. The forests, on the whole, consist of valuable trees, and this fact combined with their accessibility

to two railways and the *bunders* make them very valuable revenue yielding forests of the Province. The following statement sets out the receipts from the products of these forests in the year 1937–38 :—

—	North Thana.	East Thana.	West Thana.	(Receipts in rupees). Total.
	Rs.	Rs.	Rs.	Rs.
Timber	5,86,627	2,52,027	2,60,260	10,98,914
Firewood and charcoal ..	1,571	479	2,516	4,566
Bamboos	8,618	547	5,172	14,337
Grazing and fodder grass ..	14,322	5,654	111	20,087
Minor produce	923	4,059	3,847	8,829
Miscellaneous receipts ..	11,358	17,651	15,190	44,399
Total ..	6,23,619	2,80,417	2,87,096	11,91,132

It will be seen that North Thana contains most of the valuable forest areas in the district.

Survey of Resources—Power.

11. There are four electric supply companies in the district but only one of them, viz., The Bassein Electric Supply Company, generates its own power. The rest obtain their power from the Tatas.

(in 000 units)

—	Units generated.	Total Units sold.	Units sold for power.
Thana Electric Supply Co.	....	407	191
Kalyan Electric Supply Co.	....	301	190
Bhiwandi Electric Supply Co. ..	....	329	259
Bassein Electric Supply Co.	51	47	6

In addition to this, a part of the total electric power sold by the Bombay Suburban Electric Supply Company Limited, is consumed in the Thana district. It is not possible to estimate how much of the 1,566,000 units of power sold for industrial purposes by that company is consumed in the Thana district. But it cannot be a very large proportion.

Survey of Resources—Capital.

12. There are a number of agricultural and non-agricultural co-operative credit societies in the district. During 1937-38 there were 128 agricultural societies having a total working capital of Rs. 4,92 lakhs and 50 non-agricultural societies with a working capital of Rs. 40·39 lakhs. As for post office savings banks, there were 36 such banks in the district with 13,429 accounts in 1937-38, the balance to their credit at the end of the year being Rs. 15·5 lakhs; during the same year cash certificates to the extent of Rs. 5·7 lakhs were sold in the district. These figures cannot, however, be taken as fully indicative of the capital resources of the district.

Industries in the District—General.

13. The principal workers engaged in industrial occupations proper has been estimated at 20,657 in the Census of 1931. In addition, there are 31,358 persons employed in forest industries, stock-raising, fishing and salt-making; these may also be considered from one point of view to come under the category of "industry". Of this total number of 52,015 principal workers, the following classes of workers are more or less suppliers of pure services and cannot be classified as makers of manufactured commodities :—

Sawyers	542
Butchers	1,517
Tailors, milliners, etc.	975
Washing and cleaning	728
Barbers, hairdressers	942
Scavenging	922
	5,626

The remaining 46,389 persons are distributed over different occupations in the following manner :—

1.	Forest industries	14,802
2.	Stock raising	6,946
3.	Fishing	6,238
4.	Salt making	3,372
5.	Cotton ginning, spinning, weaving, etc. ..	1,596

6.	Rope making	141
7.	Wool	300
8.	Dyeing, bleaching, etc.	106
9.	Workers in leather	618
10.	Carpenters	1,655
11.	Basket making	1,290
12.	Blacksmiths	542
13.	Potters and makers of earthenware ..	1,311
14.	Brick and tile makers	596
15.	Manufacture and refining of vegetable oils ..	1,050
16.	Rice pounders, grain parchers, etc. ..	403
17.	Sweetmeat makers	270
18.	Boot and shoe makers	826
19.	Furniture and Cabinet makers	184
20.	Lime burners, cement workers, etc. ..	1,063
21.	Electric light and power	1,912
22.	Makers of jewellery and ornaments ..	516
23.	Other occupations	652
	Total ..	46,389

Of these 1,720 workers were employed in concerns coming under the Factories Act during the Census year 1931. The following statement gives details regarding the number of factories and the number of workers employed therein for 1931 and 1938 respectively :—

	Number of factories.		Number of workers.	
	1931.	1938.	1931.	1938.
Government and local fund	4	4	560	564
Textiles	1	16	447	1,524
Engineering	1	4	37	195
Food, drink and tobacco	..	4	..	26
Chemicals, dyes, etc.	1	3	333	1,533
Paper and Printing	1	1	78	68
Processes regarding wood, stone and glass	..	16	..	187
Processes regarding hides and skins ..	..	..	..	..
Miscellaneous	..	..	..	..
Seasonal factories	2	3	265	186
Total ..	10	50	1,720	4,283

14. The following brief review of some of the existing industries of the district is based partly on the information collected by Messrs. N. M. Joshi, A. B. Trivedi and S. M. Muzumdar, investigators of the Committee, partly on the information collected by the Secretary himself in his tour of the northern part of the Thana district and also on the other data pertaining to the district available to the Committee.

Forest Industries.

15. We have seen that nearly 15,000 persons are reported to be employed in forest industries. Most of these persons are labourers who are employed on felling, cutting and carting timber from the woods either to the *bunders* or to the railway stations. Some of them are also employed in making charcoal, the charcoal being made in the forest areas, and subsequently transported to the consuming centres. In all these cases, the labour employed is mainly on daily wages, and contractors are the employers. There are no independent artisans or small employers in these industries.

16. It seems that there is good scope for the utilisation of different materials available in the forests. There are at present only two industries which utilise the forest products. One is basket-making and the other is carpentry. Notes on both these industries are given separately. It seems that there used to be a *Kath* or catechu industry here years ago, and in fact, the *Katkaris* or the forest tribes, who are now engaged in wood-cutting and charcoal making, really derive their name from the making of *kath* (catechu). The possibility of revival of this industry needs further investigation.

17. Then again according to the Divisional Forest Officer, North Thana, a large number of species found in the forests belonging to the *Leguminosae* (*anjan, apta*, etc.), *Tiliaceae* (*dhaman, palas*, etc.), *Sterculiaceae* (*Udar, Kulu*, etc.), *Malvaceae* (*sawar, ambadi*, etc.), and *Urticaceae* ("ramie", *gol, karwat*, etc.) families yield good fibre that can be used for making suit-cases and boxes, cordage, matting, *champals*, etc. Further, the forests supply edible gum like those from *Sterculia Urens* (*Kulu*), *Anogeiessus* (*dhauta* or *dhavda*), etc., which if skilfully utilised could be made into toffees, chewing gums and other sweetmeats. No systematic attempt seems to have been made to exploit the possibilities of establishing industries based on forest products. Still, the forest industries give seasonal employment to practically all the available labour in the district, and as such form a very important part of its economy.

Stock-Raising.

18. No special information was collected under this head; but one important milk producing company located in the district was visited. This Company holds 6,000 acres of land and has 250

she-buffaloes and 50 cows, the milk being sent to Bombay. The brisk season is stated to be November, December and January, when large supplies are available, while supplies are small in June and July. The main complaint of the Manager of the Company is regarding the unorganised and cut-throat competition of the *Bhayyas* who have no overhead charges and whose milk is alleged to be adulterated. As regards butter, a complaint is made of the competition of Australian butter as well as margarine. The Company sends about 72,000 pounds of milk per year to Bombay and obtains about Rs. 52,000. The price of milk is reported to be varying from Rs. 8 to Rs. 12 per Bengal maund (of 80 seers). According to the Manager, the Company is able to realise 3 per cent. net on its capital outlay of Rs. 2,00,000. As to the possibilities of ghee making, cheese making, etc., in the district, the Manager pointed out that Thana has not got a sufficiently large milk supply to leave any surplus for this purpose and he expressed his opinion that these milk products could not, therefore, be manufactured on any large scale from local supplies.

Fishing.

19. According to the Census figures, more than 6,000 persons are engaged in fishing. Investigations were made at three of the fishing centres: Arnala, Dahanu and Umbergaon. It is estimated that there are more than 500 fishermen at Arnala, about 200 at Dahanu and 200 at Umbergaon. Bassein is reported to have over 500 fishermen. It is well-known that fishing is a seasonal industry, and the fishermen do not do any fishing in the monsoon season, i.e., from June to the middle of September. The brisk season is from October to December; and from January to May is the slack season. The monsoon season is spent by the fishermen in repairing their nets and boats, oiling them, dyeing them and so on. Though the catch is considerably smaller in the slack season, i.e., January to May, than that of the previous 3 months, the price obtained per unit is higher by about 25 per cent. The fishermen of Umbergaon, however, have a brisk fishing season right from September to the end of May. This is because they go out from February to May on long trips towards the coast of Kathiawar and Cutch. They are able to make three trips, two long and one short every year during this season, and it is estimated that the value of catch per fisherman on these three trips taken together comes to Rs. 80. Their income during the remaining period of the year is about Rs. 115 per fisherman. It is thus estimated that on an average, the fishermen are able to earn about 200 rupees per head per year. The fishermen of Bassein, Dahanu and Arnala mainly catch pomfrets, while those of Umbergaon catch *bombils*.

20. The fishing method in use is what is known as "the stake or the 'dole' method". Stakes are planted in the sea at a distance of 10 to 15 miles from the shore and the nets are tied to them. The fish are driven by the incoming or outgoing tide into the tapering ends of the nets from where they are removed by the fishermen. There is no deep sea fishing. The nets are made of mill yarn in Bassein, Arnala and Dahanu and of san hemp in Umbergaon.

21. The production is organised on what may be described as semi-co-operative lines. Each fishing boat carries about 9 to 10 persons and the catch is equally divided between the owner of the boat and the other fishermen, excepting that an extra share is given to the owner in payment of hire for his boat. In some cases, the nets are the private property of individual fishermen, while the stakes are common property ; and when a fisherman leaves one boat and joins another, he is given his share of the cost of the stakes, and that amount is recovered from the new recruit. In some cases, even the nets are commonly owned.

22. The marketing organisation is largely in the hands of middlemen. In some places, these middlemen are Muhammadans and in others they come from the fishing community. Before the beginning of the fishing season, the middlemen meet the *Tandels* or the captains of the different fishing boats and fix with them the price, and that agreement is binding on the whole of the fishing community in the particular area for the rest of the season. A certain amount of money is generally advanced by these middlemen and subsequent to that, there is a running account maintained between the fishermen and the middlemen which is closed at the end of the year. For purchase and repair of equipment, the fishermen have to resort to the *sowcar* in a number of cases. In Umbergaon, however, there is a flourishing co-operative society which is resorted to by the local fishing community. It was stated that an experiment had been started in Satpati of a kind of a communal financing of fishing operations ; it seems that from every boat, one extra share was kept as reserve, and funds thus accumulated were lent out at interest to the members of the fishing community, the profits accruing to the members.

23. Generally speaking, the fishing community is in a fairly good condition as compared to other workers in cottage industries. They are a little dissatisfied with the marketing arrangements and would like the middlemen to be eliminated. There were also one or two complaints from the fishermen of Umbergaon. These fishermen would like concessional salt to be given to individual fishermen on a deposit of Rs. 25 instead of the present system which requires a deposit of Rs. 1,000 as they allege that it has led to the domination of the trade by one merchant who is able to advance this amount. They also complained of the heavy port charges to which their boats were subjected every time they touched any one of the Kathiawar ports, even though no similar charges were levied on Kathiawar boats when they touched British Indian ports. The fishing community is a well organised unit, in some cases possessing communal reserve funds and their fairly good condition may be largely traced to the fact that they have a steady and an assured market and do not have to face any competition worth the name from better equipped units of the fishing industry. In fact, theirs appears to be the only cottage industry which has escaped the competition of large scale methods of production. If, however, something could be done to increase their catch by either improving the quality of their nets or teaching them better methods or by improving the seaworthiness of their boats, without their incurring a large extra expenditure on that account, it would result in the betterment of the economic conditions of this community.

Salt Making.

24. Salt making is a very important industry of the district, giving employment, according to the Census returns, to about 3,400 persons. It is interesting to note that the District Gazetteer compiled in 1882 estimates the number of people employed in making and trading in salt to be nearly 20,000.

25. The salt is made by the solar evaporation of sea water. The works are situated on creeks from which they are fed by a brine channel. The site is generally between the level of high water spring tides. The site is first surrounded by a strong embankment and the enclosed space divided into three divisions. The outer reservoir (*Khajina*), the inner reservoir (*Tapvani*) and the pan area (*Kondyas*). Great care is taken to make the bed of pans water-tight. Pans are formed by small clay partitions. Their normal size is 36′ × 15′. But the pans in some places are 50′ to 60′ by 15′ to 20′ and even as big as 75′ by 20′. The levels are so arranged that water flows by gravitation from the first reservoir to the second and from there into the pans. No lifting is required by this system which helps to keep down the cost of production. Sea water is admitted to the outer reservoir through a sluice at high tides and is then passed into the inner reservoir where it is allowed to concentrate by evaporation until it is saturated. Pans are irrigated with this brine from 1″ to 1½″ deep. This is allowed to evaporate and ¼ inch salt crust is formed. Salt is then raked to the edges of the pans and is allowed to drain. Fresh brine is admitted to the pans and the process is repeated. Government does not exercise control over the process of manufacture and the licensees are free to manufacture any grade of salt they like. Ordinarily Bombay salt contains a little impurity, but it is reported to be superior to Madras salt. The *kupa* or flake salt, a small quantity of which is manufactured in this Province for consumption in the City of Bombay, is made in small pans 6 feet by 3 feet by dividing up large pans by grass ropes to minimise the wind action. Pure white flake salt is thus formed which is scraped every fourth day. The salt works vary greatly in size, small works being about 5 to 6 acres and the largest about 500 acres in area. The working season lasts for about 8 months. It has not been possible to visit these salt works as during the monsoon they are flooded. A memorandum, however, was received from the Bombay Salt Merchants and Shilotris Association giving a lot of useful information on the industry. The Thana salt has an All-India market and is sent to the Central Provinces, Calcutta and East Coast, Madras and of course to the other parts of the Bombay Presidency. A complaint, however, is made that during the course of the last five years, exports to the Central Provinces, Calcutta and Travancore have fallen steadily with the result that the local salt-pan owners are in great difficulties. To meet these difficulties, they suggest the revival of the credit bond system under which salt manufacturers used to get 6 months' credit for payment of Government dues in respect of duty ;

secondly, concessions in railway freights, particularly the application of the "telescopic principle" over distances which are under the control of more than one railway; thirdly the abolition of the ground rent charged by Government of 3 pies per maund of salt; fourthly, facilities for bonded warehouses as in Calcutta; and fifthly, some safeguard against the likely competition from Goa salt due to the abolition of additional import duty on foreign salt. It may be added that salt making gives employment to a large number of persons for nearly 8 months in the year; and the preservation of this industry is important from the point of view of maintaining employment at the present level in the district.

Carpentry.

26. As is to be expected from a forest district with a large population engaged in carting, carpenters form an important part of the industrial population of the district. In addition to transport of timber, a great number of bamboos have to be transported partly to meet the demands of the betel vine plantations and partly to satisfy the demand of the basket-making trade. In addition, the grass trade of Palghar also gives occupation to a number of carts. The carpenters of the district, therefore, to a large extent, are employed in making carts and cart-wheels. Some of the carpenters at Bhiwandi, Umbergaon, Khattarwadi, and Dahanu Road were interviewed. The main articles manufactured were carts, cart-wheels, tongas, cots, and in one case building materials. The general complaint was that there had been a great fall both in prices and in output during the last 15 years and this was traced mainly to the competition of lorries. One manufacturer stated that 15 years ago there were, in Bhiwandi, 35 *karkhandars* producing 1,000 carts a year while today three are only 7 *karkhandars* who prepare about 350 carts Similar estimates of production are not available for the other centres. The market for the carts and wheels extends over the whole of the district, and in the case of Bhiwandi goes beyond to Nasik, Poona, Satara, etc., and in the case of Khattarwadi, it goes up to Surat. The demand is seasonal, the brisk season being—as in the case of all industries we have surveyed so far—from November to March.

27. There are not many large employers in this trade. It is mostly dominated by independent artisans and small employers usually engaging one or two persons to assist them. Of course, they have also to engage the services of blacksmiths in making the axels, wheel tyres, etc. Finance for purchasing raw materials has to be borrowed in many cases and interest is reported to be charged in some cases at 18 per cent. Statistics of output, costs and earnings were given only by four carpenters

and are embodied in the following statement :—

Place.	Articles manufactured.	Volume of output.	Cost.	Receipts.	Earnings per year.
1. Umbergaon ..	Wheels ..	30	480	900	420*
2. Khattarwadi ..	Tongas ..	6	1,176	1,506	330†
3. Do. ..	Riding-carts ..	12	570	720 to 900	150 to 330
4. Do. ..	Cots ..	84	420	672	252

* There are two brothers. They also do masonry work in addition. Some income is also obtained from repair work.

† He earns an additional Rs. 23 a year by repairing agricultural implements.

It can be roughly estimated, therefore, that this trade on an average provides an income of Rs. 20 per month to the carpenter. Hence it is not in such a very bad condition in this district. At the same time it should be remembered that the peculiar conditions of the district have ensured the demand for carts, and therefore the demand for the services of the carpenters. However, the carpenters all complain of a very great fall in prices and output, and they demanded that some restrictions should be imposed on transport by lorries, particularly into the rural areas. It should also be mentioned that one of the carpenters interviewed, who used to make building materials now complains that most of the doors, windows, etc., are obtained ready-made from factories in Bombay, and this deprived him of his business. One of the big manufacturers interviewed at Thana who has an oil mill, flour mill, rice mill, etc., has also a saw mill, with which he has combined the making of furniture. He stated that he has got a steady demand for his furniture, and he is able to market them at good prices. It is, therefore, possible—if appropriate training be given to these carpenters—that some of them may be diverted to the making of modern furniture which would ensure the continuity of their employment.

Cotton Weaving.

28. The cotton weaving industry of the district is more or less concentrated at Bhiwandi. It seems that many years ago there was a silk weaving industry in the Thana district. But it had already practically disappeared in 1882, when the Thana District Gazetteer was written as at that time there were reported to be only 6 families working in that occupation. The Gazetteer states that these weavers prepared silk cloth with check pattern and, silk cloth of symmetric saracenic design in a variety of colours. They could not, however, stand the

competition of cheaper Chinese and French silk. It is also reported that there was a cotton weaving industry in Thana town, preparing check cotton cloth known as Thana cloth. Today the cotton weaving industry is almost completely located at Bhiwandi which is estimated to contain a weaving population of nearly 1,200 to 1,500 persons. Bhiwandi is remarkable in that it was originally a hand-loom weaving centre and during recent years it has witnessed a considerable supersession of the handloom by the powerloom, so much so that today the estimate is that there are 600 powerlooms and not more than 300 handlooms in this centre, as against nearly 3,000 handlooms in 1928.

29. The investigators interviewed 5 persons engaged in handloom weaving, 3 who use powerlooms and 3 who have both handlooms and powerlooms. Of the five handloom weavers who were interviewed four were independent artisans and one was an employer who had under him 15 weavers. The yarn used by the handloom weavers is of counts 40, 80, 2/80, 2/40 and 2/64 including mercerised yarn, and artificial silk which is mainly used for borders. The yarn is almost wholly Japanese in origin. All the persons interviewed were using fly shuttles. The following statement sums up the information the investigators were able to collect regarding the value of output per month :—

	Rs.
Value of yarn consumed per loom	34
Value of output per loom	47
Value of yarn consumed per weaver	27
Value of output per weaver	40

The value of handloom production in Bhiwandi is reported to be somewhere between Rs. 2 lakhs and Rs. 2½ lakhs per year. The handloom weavers used to make good *sarees* and *khans* but a number of them have now given up the making of *sarees*. The manufactured product is sold to local merchants for cash, as these producers cannot afford to sell on credit.

30. Their main complaint is about the competition of powerlooms. It appears that powerloom competition began to be felt about 15 years ago from Sangli and Ichalkaranji ; from 1930 it has started in Bhiwandi itself where powerlooms have grown very rapidly in number. According to the data supplied by one of the *karkhandars*, it seems that, 4 *sarees* can be produced on a powerloom per day giving employment to 2 weavers, and on a handloom a weaver can produce only one *saree* in 2 days. The handloom weavers, therefore, feel that it is impossible for them to meet the competition of the powerloom unless something radical is done for them, and it is suggested that powerlooms should not be allowed to produce Deccani *sarees* and *khans*, or in the alternative a subsidy should be given to handlooms, of 6 annas per *saree*, which should be met by taxing the output of powerlooms. It appears that all the persons interviewed were following weaving as their hereditary occupation and that most of them were independent artisans.

31. As for powerlooms the three persons interviewed were all employers one of whom was employing 25 persons, another 150 and a third 450. It is estimated that there are about 600 powerlooms in Bhiwandi giving employment to more than 1,200 persons. The following detailed estimate was offered by one of the persons interviewed, who stated that there are two *karkhanas* having more than 50 powerlooms, two having between 20 and 50, ten having between 10 and 20, and 20 having less than 10. Another person estimated that there were 1,200 persons working on powerlooms out of whom 15 were *karkhandars*. The yarn used is mostly Japanese, the counts being 40, 60,2/60 and 2/120, while artificial silk is mainly used for borders. It was stated that Indian yarn was more costly. The looms were mostly English, either bought new in England through their agents in Bombay, or bought secondhand from Bombay and Ahmedabad. The market was provincial. The statistics that were obtained were not complete. Only one employer gave adequate data from which it is estimated that the value of output per loom comes to Rs. 200 to Rs. 266 per month while that of yarn purchased per loom comes to Rs. 134 to Rs. 147 per month and Rs. 67 to Rs. 73 per worker per month. Some complaint was made about the competition of the Sangli industry but, generally speaking these persons were in a prosperous condition; and according to their own admission, their profits ranged from 6 to 9 per cent. of their invested capital.

32. Three persons who had both handlooms and powerlooms were also interviewed by the investigators. Of these, 2 followed it as their hereditary occupation. The following statement gives the statistics of the looms owned by them and the number of workers employed :—

Employer.	Number of persons employed.	Number of manual workers.	Number of powerlooms.	Number of handlooms.
A ..	63	54	Details not available.	
B ..	73	70	19	50
C ..	55	53	42	19

The yarn used by them was of counts 40, 52, 60, 80 and 100, which was mainly Japanese.

33. Details of the value of production were not available from the persons interviewed by the investigators, but it appeared that in the case of the person who had 42 powerlooms and 19 handlooms the value of output per loom was Rs. 131 and per worker Rs. 151 ; whereas in the case of the person who owned 19 powerlooms and 50 handlooms the corresponding figures were returned at Rs. 109 and 107 respectively. Their markets are provincial. One of the persons interviewed

stated that his goods are sold in Bombay, Poona, Belgaum, Kolhapur, Madras, Bangalore, Nasik, Akola, Nagpur, etc. Some of them have canvassers, while others have not. Sales are mostly on credit. Workers are employed on piece-wages which are reported to vary from 7 to 12 annas per *saree*.

34. There are also some powerloom weavers who have taken to making artificial silk products. They complained of Japanese competition. There is no doubt that powerloom weaving has come to stay in Bhiwandi, in fact, it was reported that 100 more powerlooms were in course of erection at the time of the investigators' visit. It also appears that in a very short period of time the handloom weaving industry will practically disappear from this place.

Potters, Makers of Earthenware and Brick and Tile Makers.

35. According to the Census returns, about 1,900 persons are engaged in the occupations mentioned above, nearly 600 of them specialising in making bricks and tiles. Some of the potters at Umbergaon were interviewed and the following note is based on the material collected at that place.

36. It is estimated that there are 10 to 12 houses of potters in Umbergaon with a total population of 40 to 50 persons. The working population is estimated at 25 to 30, of whom 15 are males. The articles manufactured are country tiles, bricks, cooking pots and flower pots. It was stated that the industry is in a declining condition and output has fallen a great deal in recent years.

37. Earthen pots are made indoors and generally during the monsoon. Country tiles and bricks are made during the rest of the year. The season begins in November and ends by the middle of May. To prepare 15,000 country roof tiles, the potter requires 30 cart-loads of saline earth from the creek. Five persons including the potter can prepare 1,000 unbaked tiles in a day. 15,000 unbaked tiles are prepared in 15 days. Another 15 days are required to prepare the kiln for firing and the filling of the *bhatti*; another 15 days are required for the baking of the tiles. At the end of the forty-fifth day 15,000 tiles are made available. The working season lasts for five to six months, the maximum capacity being 60,000 tiles per *bhatti*. The tiles are sold at Rs. 1-10-0 per 1,000 to the *sowcars*.

38. As for bricks, 10 cart-loads of earth at the rate of 5 cart-loads per rupee were required for making 1,000 bricks and the husk required for mixing was valued at 4 annas. One potter and three labourers can mix and prepare 1,000 unbaked bricks in a day and a *bhatti* can hold 10,000 to 12,000 bricks. The *bhatti* takes 15 days to fill and the baking takes another 15 days.

39. As for earthen pots, one cart-load of clay bought for 8 annas could be used for making vessels worth Rs. 3. The fuel required for the purpose if bought, would cost from Rs. 2 to Rs. 2-8-0, but actually it is not bought, twigs and waste materials being collected by the

potters, and the actual amount for all expense on fuel coming only to Re. 1. It takes them 15 days' working at the rate of 3 to 4 hours a day, to prepare vessels from one cart load of earth, and they use 5 cart-loads a year. These potters have been very hard-hit by the competition of Mangalore tiles, which have now captured popular taste. To make matters worse, persons who rebuilt their houses with Mangalore tiles sold their old and used country tiles at very low prices. The potters who were interviewed stated that some 20 years ago, 25 lakhs of country tiles were sold at their place. But now the number has fallen to about 8 lakhs. The decline in country bricks is even higher. They now hardly sell 25,000 bricks whereas it is estimated that some 25 years ago about 2 lakhs of bricks were sold. It was stated that the fall in the demand for country bricks is due to the competition of factory-made bricks.

40. Not only have the earnings of the artisans in this trade fallen due to its declining condition, but it is also controlled by the *sowcar*. It seems that sometime in July or August when they require cash for purchasing earth, etc., money is borrowed from the *sowcar* who makes it a condition that the wares are to be sold only to him at prices fixed in advance. One of the potters interviewed, stated that he had to sell his country tiles to the *sowcar* at Rs. 1-10-0 per thousand, while the *sowcar* would be able to sell them from Rs. 2 to Rs. 2-4-0 and sometimes even at Rs. 2-8-0. On enquiring as to why they did not take advantage of the co-operative society at Umbergaon, they replied that they were not able to pay the instalments in time and that the rules of the co-operative society being very rigid, they preferred the *sowcar* who took into consideration their difficulties and gave them extension of time whenever they required it.

Basket Making.

41. The Census returns give about 1,300 as the number employed in basket-making, mat-making, etc. This is the highest number employed in this industry in any district in the province except for East Khandesh. This is due to the existence of large plantations of banana, betel-vine and *chikoo* and other fruits in the district. A few of the basket-makers at Mahim where there are large banana and betel-vine plantations, at Masoli near Dahanu and at Bordi where there are large *chikoo* plantations were interviewed. The industry is almost entirely in the hands of *Harijans*, and in some places, like Masoli and Bordi, women do most of the work, as their men-folk go to Bombay to work as domestic servants. In Mahim, both men and women are engaged in this occupation.

42. In Mahim, there are about 25 families whose main occupation is basket-making. Their market is mostly local. Two women working for a day can produce 12 baskets and one bamboo is required for the purpose; each pair of baskets fetches 9 pies; 100 bamboos cost Rs. 12 for those who have to hire carts for fetching bamboos from forests; and Rs. 7-8-0 in the case of those who own their own carts; these latter numbered 7. The daily earnings per worker, therefore, comes to Re. 0-1-8 in the case

of those who own their own carts and Re. 0-1-5 in the case of those who have to pay cart hire. When they did not have the cash to go and fetch the bamboos themselves from the forests, they had to buy it retail at 4 annas a bamboo ; that left them hardly anything for their labour. Their main complaint was about the price of bamboos. A request was made for concession in the matter of fees charged by Government for cutting bamboos (now Rs. 3-8-0 per 100). It was also suggested that if they were financed for the purchase of bamboos, by Government or a non-commercial organisation, they would be able to earn more from their products.

43. Conditions are practically similar in the other centres visited. In Masoli, they make, in addition to baskets, country huskers both big and small. The daily earnings per head averaged Re. 0-1-0 in the case of those making big country huskers, Re. 0-0-9 for those making small ones, and Re. 0-1-5 for those making baskets. The forests are too far away for the *Harijans* to fetch their own bamboos and bamboo is purchased retail from one or two local merchants who practically control the trade. Most of the workers are indebted to the merchants. It is reported that the Village Uplift Committee has started a scheme of purchasing the bamboos on wholesale basis, and that bamboos worth about Rs. 500 were bought under this scheme. The Committee was thus able to sell bamboos at 5 to 6 per rupee as against local merchants' rate at 4 per rupee. The villagers expressed their appreciation of the scheme.

In Bordi, *chikoo* baskets are the main articles of manufacture ; and the workers who are mostly women, get an income of Re. 0-1-1 per day ; where they purchase the bamboo on credit, their earnings are lower.

44. Generally speaking, earnings in this trade vary from Re. 0-1-0 to Re. 0-1-6 per day—an appallingly low figure. In order to increase this figure it is necessary to approach the problem in two directions ; on the one hand, the raw materials should be provided cheaper partly by better organisation and partly by Government granting concessions in the matter of fees charged for cutting bamboos ; on the other hand, the sale of their products should be organized in a co-operative manner and higher prices should be obtained. Even if this results in a rise in the price of fruits or betel-vines or in a fall in the profits of those owning the plantations concerned, it would be worth considering. It must be added that in Masoli and Bordi, conditions are not so bad, as the men work in Bombay and further each family maintains a pig or two. It is only in Mahim, where basket-making is the principal occupation of both men and women that conditions require immediate and urgent improvement.

Lime Making.

45. According to the Census returns there are about 1,063 lime-burners in the district. One of the lime-burners at Dahanu, who was interviewed, stated that the demand for lime has fallen a great deal during the last 5 or 6 years, as also its price. He himself who was a big manufacturer, it seems, sold 2,000 *khandis* (20 maunds of 28 lbs. each) at an

average price of Rs. 24 in 1932, while in 1937, he only sold 800 *khandis* and that too at a price of only Rs. 20. He further stated that he at present made 50 *khandis* in 5 months of the year, and made a profit of Rs. 3 on every 7 *khandis* of lime that he manufactured. The increasing use of cement has affected this industry, and this factor is bound to affect it even more in future.

Oil-seed Crushing.

46. No detailed inquiries were conducted into this industry. One of the investigators, however, interviewed a person at Thana engaged in oil crushing by the *ghani* method. He informed the investigator that whereas 10 years ago there were 10 to 12 persons at Thana engaged in oil-seed crushing with about 25 *ghanis*, today he was the only person in that industry and had only 2 *ghanis*. The decay of this industry is of course due to the competition of mill crushed oil, which is much cheaper.

Tanning and Leather Footwear.

47. Some of the *Chamars* or leather workers, at Masoli near Dahanu Road and at Umbergaon were interviewed. It was stated that at Masoli there were about 20 houses of *Chamars*, the male workers numbering from 45 to 50. It appears that to tan one buffalo hide they required :—

	Rs.	a.	p.
Chunam 2 paylees	0	4	0
Avil 8 paylees	0	8	0
Babul bark 2 head-loads (nearly 2 maunds) ..	1	0	0
	1	12	0

The whole process took from 10 to 15 days, and usually, 2 to 3 hides were taken at the same time for tanning. The cash value of the strap *champals* and saddle equipment, which were made out of one buffalo hides, was estimated, at Rs. 8.

48. In addition to tanning and making footwear these persons follow carting as a subsidiary occupation. In fact, they owned more than 20 carts and it was stated that without carting they could not make any living. Their main complaints were : (1) the competition of machine made *champals* which had a superior finish and (2) the difficulty of getting raw materials. It appears that agents of wholesale merchants scour the villages and take away the raw hides, making it very difficult for these *Chamars* to get local supplies of hides. It must be added that these tanners realised that their methods of tanning were ancient and they expressed their desire to learn better tanning methods.

49. The *Chamars* who were interviewed at Umbergaon made country *champals* and leather requisites for the country carts. It was stated that there were 14 houses of *Chamars* in that place, of whom 10 followed

agriculture and 4, other occupations. They also did carting. In fact, 8 of them had carts of their own ; and leather work was undertaken by them only when they were neither carting nor working on their land. One of the boot-makers stated that his trade had fallen a great deal because of the competition of Japanese goods.

A *Chamar* from the village of Virol—in Chinchni—stated that there were 18 houses of *Chamars* in this village and that they followed the profession of agriculture. He also said that out of the 18 families perhaps only 4 were exclusively engaged on working in leather. They bought the hides directly from the Mahars, buffalo hides at Rs. 1-8-0 and cow hides at 8 to 10 annas. Nine days were required for tanning one buffalo hide, the expenditure on the same being :—

	Rs.	a.	p.
Chunam	0	4	0
Avil leaves	0	8	0
Babul bark	0	8	0
	1	4	0

12 to 15 *champals* were prepared out of one buffalo hide and one pair of *champals* sold for 8 as. to Re. 1, the average price being 10 annas. Roughly speaking, they got from this occupation, 4 to 5 annas on an average per day, if they were at work. The main complaint was about the competition fo Bombay *champals* which were made of better tanned leather. The *Chamar* was anxious to learn better tanning methods, if an opportunity could be made available to him. It will be noticed that the figures of cost given above by the *Chamar* at Chinchni are lower than the figures given by the one at Dahanu. It is, therefore, very difficult to rely on these figures of cost. But 2 or 3 facts were revealed from the interviews with these different *Chamars*. It appears that most of these leather workers are also engaged in another occupation, either agriculture or carting, and secondly, their business is in a state of decline partly because of the fall in the demand for the leather equipment used in carting, and partly because of the competition of *champals* made of better tanned leather. They seemed also eager to learn new methods.

Other Industries.

Machne-Making.

50. There are in Thana district three persons who are making rice-milling machinery. Two of them had their factories in Dahanu and the third at Bhiwandi. Of the two persons at Dahanu, one employed 40 persons and the other 35. It appears that the equipment required for the purpose cost about Rs. 10,000. The markets are inter-provincial and it was stated that their machines were sold not only in India but were also sent to Burma and Africa. The fear was expressed that once the Burma market was fully exploited, they would

find it difficult to find a profitable sale for their products. The main demand was for protection against foreign competition. It was also suggested that if loans could be made available, it should be possible to extend or improve their equipment. Expert technical advice would also help in this direction. Further, a request was made for concessions in freight charges, so that their markets could be expanded. The total value of the output of the two factories in Dahanu was estimated at 1,25,000 rupees. Though small, the industry is quite important in the economy of the district. One of the three persons who were interviewed was anxious that Thana should be industrially developed because he was not sure how long the demand for rice-milling-machinery would last, and he was anxious that alternative work should be found for his machinery.

Die-Making.

51. This is an entirely new industry which has sprung into existence at Chinchni during the last 30 years. There are now more than 30 die-makers at Chinchni employing about 300 artisans and apprentices. The value of their output is estimated at between Rs. 50,000 and Rs. 75,000 a year. It seems about 40 years ago, one Purushotam Vaman Maistri found out the method of making dies and he made a great deal of profit. The apprentices employed by him were responsible for the spread of this industry. Even to-day the organisation of the industry is such that each artisan has two or three apprentices who are paid from 4 to 6 rupees a month, while the artisans get about Rs. 25 to 30. The apprentices after learning the trade very often set up independent business. It seems the number of shops has increased by 10 during the course of the last 5 or 6 years and more and more shops are coming into existence.

52. Dies are made for various articles such as bangles, rings, buttons, necklaces, bracelets, *saree* pins, hairpins, etc. Sheffield steel is used as it is considered to be superior for this purpose to Indian steel. The equipment of one big employer consisted of a French drill machine worth Rs. 150, 8 American drill machines worth Rs. 24 each, two German hammer rollers for file sharpening costing Rs. 13 each, one American roller costing Rs. 10, for the same purpose, and a press for purposes of trying all dies prepared. The equipment is estimated to cost about Rs. 1,000 and he employs about 10 artisans and 6 apprentices. Another employer who employs three persons stated that his equipment is worth about Rs. 200. The total value of the fixed capital investment employed in the trade is estimated at Rs. 12,000.

53. The markets are inter-provincial. The dies are marketed all over India and also Africa, and goldsmiths who have important orders to place come down to Chinchni and try to secure favourable prices. A part of the output is thus taken away by goldsmiths who come in person to Chinchni. It is evidently a profitable trade, and

two persons stated that their monthly profits come to between Rs. 100 and 120. The skilled artisans are paid on an average at the rate of Re. 1 a day. There were practically no complaints excepting that of local competition. Some of the persons in the industry felt that it was expanding at a reckless rate, and that unless some check was placed on its expansion, there might be a steep fall in the earnings of persons engaged in the industry. It was also suggested that there was no reason why they should not prepare dies for watch-cases and for toys of various kinds, but they did not know the processes and if some special training could be given to them it would enormously increase the scope of their market.

54. This is an entirely new industry and one that should have an expanding market. If some research could be undertaken into the making of dies for purposes other than jewellery, it might lead to the establishment of a really large industry in this centre.

Glass-Bangle Making.

55. It seems that about 20 or 30 years ago, there was a flourishing glass bangle industry in this district, bangles being supplied to a large extent to the Bengal market. That market is now lost. There is a local tradition that some people came from Bengal and saw the processes employed in bangle making at Tarapor and went home and established their own factories. In any case, from the reports which were obtained, it seems true that the bangle making trade has declined a great deal during the last 30 years. It recently had a certain amount of revival due to the swadeshi movement. At present there are two branches of the industry, one at Tarapor and the other at Chinchni. There are more bangle makers at Chinchni than at Tarapor.

56. Each bangle making *karkhana* gives employment to some 6 to 8 persons, two of whom may be small boys. The raw materials used are mostly broken soda water bottles, glass jars, etc., and coloured dyes. The thin type of glass obtained from broken glass jars, chimneys, etc., is reported to be good for making bangles, but, it seems that it cannot be obtained in sufficient quantities. The broken pieces of soda water bottles which are of thick glass are used to prepare cheap bangles which are sold at about Rs. 1/8 to Rs. 2 per thousand.

57. Of the two factories visited at Tarapor, one produces goods worth Rs. 250 per month, while the other produces goods worth Rs. 275. They work only for about 21 to 22 days in a month. The artisans are paid at the rate of Re. 1 per day and the bangles are sold in addition to the places in the Bombay Province, also to merchants in Madras, Bangalore, Mysore, Salem, Trinchinopoly, etc. Each bangle making factory tries to keep secret the names of merchants to whom it sends goods so that other factories may not poach on its markets. The tools required are very cheap. One manufacturer

stated that his instruments cost him only Rs. 3-12-0. But it was pointed out that this was a declining trade, and unless something was done to stop foreign competition, it was not possible for the industry to survive. It was pointed out that the bangles coming from abroad had a superior finish and lustre. It was suggested that Government should investigate the possibility of locating a glass making factory near Chinchni or Tarapore, as better bangles could then be made in consequence of better raw material being made available to the local bangle makers. The bangle makers at Chinchni, did not have anything very much to complain about. They seem to be getting an income of 20 to 25 rupees a month. The industry at Chinchni is worth noting as a handmade industry which has still survived competition to some extent and which gives a reasonable wage to the persons engaged therein.

Possibilities of New Industries.

58. The district appears to have good possibilities for industrial development. Thus, for example, the manufacture of boxes, wooden toys, and other wooden articles of every day use, of suit-cases and other fibre-made articles can be mentioned among possibilities arising from the forest resources of the district. Then again, the banana plantations of the district, result in the production of a large quantity of banana stems which are at present thrown away; research could be undertaken to find out if this wasted material could be made use of either for the manufacture of paper or artificial silk. The district has also a large number of date palm trees and the possibilities of power alcohol distillation are worth investigation. Among other possibilities may be mentioned the coir industry, an industry for preparing tomato-juice, and *sukeli* or the dry banana industry. The possibilities may also be investigated of making straw boards out of the vast quantities of rice husk that are available in the district.

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